FERABOLI

MONDIALE 110

EN ***USE AND MAINTENANCE***

*) Valido per Paesi UE
*) Valid for EU member countries
*) Valable dans les Pays UE
*) Gilt für EU-Mitgliedsländer
*) Válido para Países UE

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INTRODUCTION

Dear Customer,

read this manual carefully, to learn proper operations of the machine and to correctly perform maintenance works, so that you can avoid injury or machine damage.

This manual have to be considered a permanent part of the machine and must accompany it at the time of sale.

Measurements in this manual are given in the metric system. Use only correct spare parts and fastening devices.

The left and right sides are to be intended as looking in the direction of advancement of the machine.

Accurately record the serial number, which must be also communicated to the dealer when ordering spare parts. Identification codes must be kept in a safe place.

Before delivering the machine, the dealer should have performed a pre-delivery inspection. After the first 100 hours of operation, schedule an after-sale inspection with the dealer to ensure the best performance.

The machine has been designed solely for normal agricultural or similar purposes (intended use). Any other use shall be considered as an improper use. The manufacturer disclaims any liability for damage or injury resulting from improper use. These consequences will be borne solely by the user. Scrupulous compliance with operating modes and regular maintenance and repairs specified by the manufacturer are considered essential elements within the context of intended use.

This machine must be used, serviced and repaired only by personnel aware of its particular specifications and relevant safety standards (accident prevention). Always act in compliance with accident prevention regulations, general safety and occupational health standards and road traffic regulations.
Any unauthorised modifications made to this machine free the manufacturer from any liability for damage or injury.

To anyone who has purchased a used machine, please contact a **FERABOLI** dealer to communicate its serial number. This will allow **FERABOLI S.p.A.** to inform the new owner regarding product improvements or other information.

All information, illustrations and technical specifications contained in this manual are based on the latest information available at the time of publication. Subject to change without notice.

Pre-delivery inspection

The following inspections, adjustments and interventions were performed before machine's delivery:

- ☐ All grease fittings lubricated.
- ☐ Gearbox oil level checked and topped up (as necessary).
- ☐ Tyre inflation checked and adjusted.
- ☐ All screws and nuts tightened.
- ☐ Grease removed from the mesh cutter.
- ☐ Monitor battery cable properly connected.
- ☐ Testing cycle performed.
- ☐ Hatch opened and closed freely.
- ☐ Pre-cutting device properly operating.
- ☐ Monitor properly operating.
- ☐ Switches and sensors properly adjusted.
- ☐ Absence of leaks from hydraulic hose or respective connections verified.
- ☐ Proper chain tension and lubrication verified.
- ☐ Paint and stickers smooth and clean.
- ☐ Delivery of operator's manual to customer.
- ☐ Delivery of other documentation (CE – road approval where required).
- ☐ The operator is aware of the safety precautions to be followed with the machine.

Date:

Signature of the dealer or his technician:

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1. CERTIFICATIONS

“CE” Conformity
The round baler is a machine with "CE" marking in compliance with the standards of the European Union described in 2006/42/CE Directive and 2004/108/CE Directive (Electromagnetic Compatibility), as shown in the “CE Declaration of Conformity” provided with every machine.

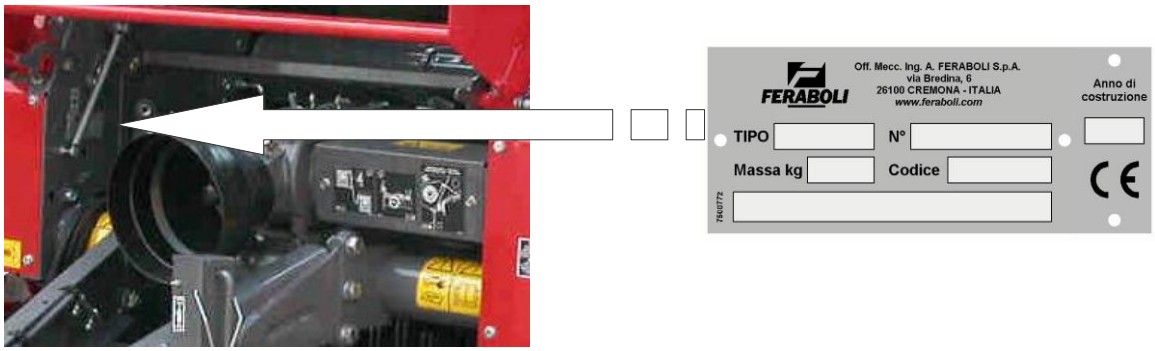
FERABOLI S.p.A. declines all liability arising from use of the machine on products that do not correspond to European standards.

If the machine should be sold to a third party, the declaration of conformity must be handed over together with it.

Identification

The round baler is supplied with:
- Operator's Manual
- CE Declaration of conformity
- Instruction handbook for the cardan shaft

Every machine is also provided with an identification plate showing:
- Name and address of the manufacturer
- “TIPO” = model of the machine
- “N°” = serial number
- “Massa kg” = weight of the machine
- Machine Designation
- Year of manufacture
- "CE" marking



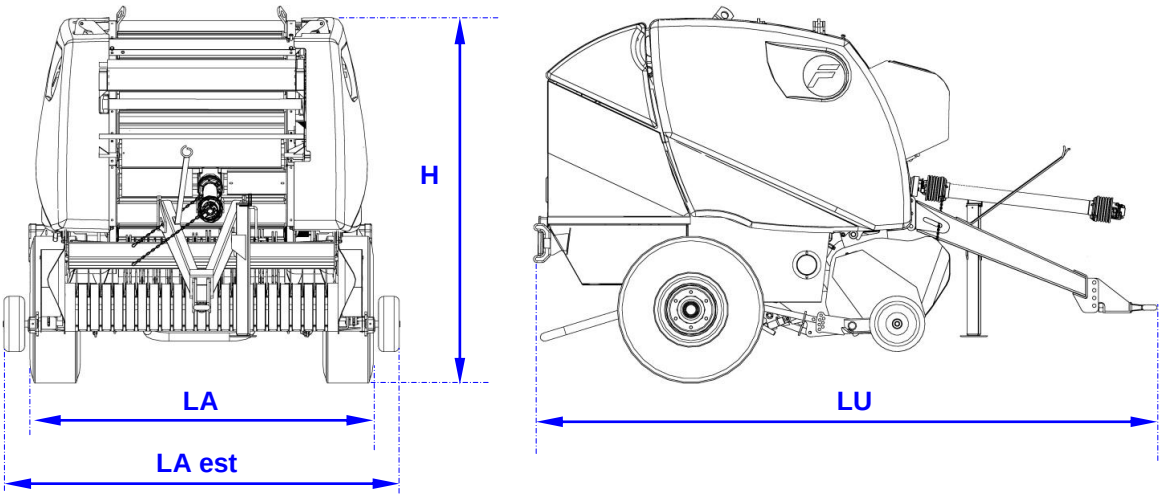
The information shown on the identification plate of the machine must always be quoted in any request for spare parts and/or assistance.
Copy the machine information into the plate reproduced on the back of the cover for ease of consultation. Keep this data in a safe place along with this manual’s code.

2. TECHNICAL DATA

MONDIALE 110 Specifications

The technical data contained in the following tables are informative therefore we reserve the right to modify them without obligation to give prior notice.

*The symbol **"÷"** indicates a value lying between a minimum and a maximum.*



DIMENSIONS

LU = machine length	3560mm
LA = machine width	2000mm
LA est = pick-up width	2300mm
H = machine height	2120mm

WEIGHT

Model	MONDIALE 110	MONDIALE 110 CUT
Weight	2180kg	2260kg

BALE CHARACTERISTICS

Diameter	1100mm
Width.	1000mm
Chamber type	Fixed
Bale density	Variable hydraulic control

TRACTOR REQUIREMENTS

PTO speed	540 g/1’
Required power minimum kw-cv	36 kw – 50 kw
Hydraulic system	n°.2 double-acting distributor
Necessary oil flow rate	25 liter/1’
Electric system	7-pin socket 12V=
Speed transport by road max.	40km/h

(*) *with tractor having a cabin*
If a tractor without the cabin is used, ask for the "ZMP2015 - Hydraulic Line Protection” kit.

CARDAN SHAFTS

	3600077 (OC+SB4 2000Nm)
	3600049 (OC+SB6 2700Nm)

TYRES

serie	11.5/80-15.3

Ply (P.R.)	12-14
Index radius (mm)	410
Speed (km/h)	40
Max.wheel capacity (kg)	1930÷2187
Pressure (bar)	4,1÷4,75
External diameter (mm)	845

PICK-UP

Collection width	1585mm
Pitch between tines	69mm
Roll-holder diameter	250mm
N°. bars for roll-holder	4
N°. tines for bar	21
N°. of overall tines	84
Support wheels	Fixed
Dimensions of wheels /n° wrappers	16.650 / 10
Adjustment of working height	Mechanical

CUTTING DEVICE

model	**MONDIALE 110 CUT**
N°. of knives	10
Feed rotor	three-pointed star
Knives control	hydraulic
Opening tape	hydraulic
Cut length	77mm

BINDING

type	**NET**
Yarn count of net (g/m)	12÷16
Reel width net	1000÷1100mm
Reel diameter net	250mm
N°. of conveyable reels	1
Command	electronic

FEATURES OF THE CONTROL SYSTEM

type	ICON
Power supply	11÷15 V Dc
Controls: membrane keyboard	16+1 keys
Display	Graphic LCD: 240x64 pixels
Back lighting	White LEDs
Microprocessor	16bit 24Mhz
Memories	Flash + Static RAM + Eeprom
Buzzer	Buzzer
Degree of protection	IP 65
Operating temperature	10°÷50°
Storage temperature	-10°÷70°
Relative humidity	90%
Container	ABS
Colour	Charcoal
Method of fastening	Magnet / Suction Cup
Overall size (max.)	102x 220x 40 mm
Weight	425g
Conforming to CE regulations	Yes

MODULES (sensors, motor controls, etc.)	
Power supply	11÷15 V Dc
Degree of protection	IP 65
Operating temperature	-20°÷70°
Storage temperature	-30°÷80°
Relative humidity	100%

3. GENERAL SAFETY REGULATIONS

In addition to the regulations contained in this operator's manual, observe the general regulations for safety and accident prevention in force in your Country.
This machine has been designed and manufactured for the maximum safety at work. Maintenance of these safety conditions is obligatory for the user.
Therefore, read this manual very carefully especially the safety regulations and with great attention to those operations that are potentially very dangerous; if you do this while working it will be too late!

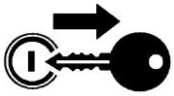
FERABOLI S.p.A. declines all and any liability for failure to observe the safety and accident prevention regulations provided in this manual.
All and every liability for damage caused by the improper use of the round baler or modifications made without authorisation is also declined.

Recognize safety information

This ALERT is a **safety warning** symbol.
When shown on the machine or in the manual, it alerts a potential for personal injury.
Comply with precautions and follow all recommended safety operations.

This is the ALERT symbol for **protecting mechanical parts**, it indicates a possible situation of danger.

This symbol is a WARNING **reminder for the operator**. It reminds the operator to switch off the tractor and remove the key from the dashboard. **Whenever this symbol is found in the operator's manual, you must switch off the tractor and remove the key from the dashboard before carrying out the operations described.**



Terminology adopted

Warning words are used with safety symbols: WARNING, CAUTION (personal security) and IMPORTANT (mechanical parts safeguard).
In this manual all the alert/warning safety points are shown by those symbols and associated with a **"signal word"** which varies depending on the immediacy or potential of the dangerous event.

WARNING

CAUTION

IMPORTANT

WARNING!
The word **WARNING** indicates a potentially dangerous situation that may result in death or serious injury if not avoided.

CAUTION!
The word **CAUTION** indicates a potentially dangerous situation that may result in minor or moderate injuries if not avoided.

IMPORTANT!
It warns that if the operations are not carried out correctly serious damage to the machine may result.

Follow safety instructions

Before operating the machine:

- Learn how to properly use the machine and controls. Do not allow use by untrained persons and users that haven't read this operator's manual.
- Periodically check the conditions of the machine as a whole, including all safety and protection devices.
- Carefully read all safety messages contained in the manual and on safety signs applied to the machine.

  Keep safety signs in good condition. Replace any missing or damaged safety signs.

  Make sure that new equipment components and spare parts for repairs are complete with current safety signs. Spare part safety signs are available from your **FERABOLI** dealer. (Spare parts and components sourced from other suppliers may contain additional safety information not shown in this operator's manual).
- Keep your machine in proper operating condition
- All safety guards must be mounted and secured according to manufacturer instructions and must never be tampered with. Any changes made without authorisation can compromise machine operation and/or safety and shorten machine life.

  If you do not understand any part of this manual and need assistance, contact your **FERABOLI** dealer.

WARNING!

- **Do not use the commands, pipes or other protruding parts of the machine as handholds.**
- **Assemble, operate and disconnect the cardan shaft always according to information and safety standards supplied for shaft use, contained in the manual provided by the shaft manufacturer and delivered with the shaft itself.**
- **The transport of persons or animals on the machine or on the tractor is strictly prohibited.**

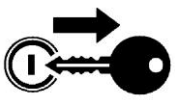
WARNING!

Use of the machine by any person who has not read and understood the information contained in this manual is strictly prohibited.

Getting used to work in safe conditions

Learn maintenance procedures before starting work. Keep the area clean and dry.
Keep hands, feet and clothing far away from moving parts.

Never lubricate, service, or adjust the machine in motion.
Disengage all motion transmission components and operate controls to relieve pressure.



- **Lower equipment to the ground.**
- **Stop the engine.**
- **Remove the ignition key.**
- **Let the machine cool down.**

- Securely support any machine components that must be raised for maintenance. Keep all parts in good condition and properly installed.
- Immediately repair any damage.
- Replace any worn or broken parts (always use original **FERABOLI** spare parts and components).
- Remove any build-up of grease, oil or debris.

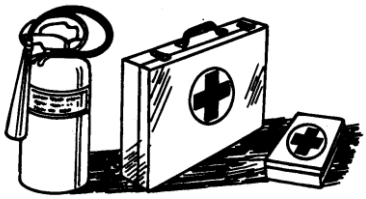
On towed equipment, before servicing electrical system components or welding on the machine, disconnect electrical wiring from the tractor

Protecting persons and animals

Do not allow the passage or stopping of any person close to a machine in operation.
During operation, keep people, livestock and pets away from the working area of the machine.

Preparing for emergencies

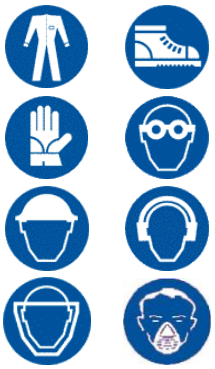
Be prepared in the event of a fire.
Keep an extinguisher and first aid kit on hand.
Keep emergency service numbers near the telephone: doctors, ambulance service, hospital, and fire.



Individual protection devices (D.P.I.)

Wear suitable clothing during operations.
Wear close fitting clothing and safety equipment appropriate to the type of work being performed. Never wear loose clothing that could become hooked in the mechanisms and the moving parts of the machine.

Long hair must be pulled back.



During maintenance and repair operations, use of the following protections is required:

- safety gloves
- safety shoes
- visor and/or safety goggles

Safe operation requires the full attention of the operator. Do not wear headphones for the radio or music while operating the machine.
Prolonged exposure to noise can cause impairment or loss of hearing. To guard against or uncomfortable loud noises, wear a suitable hearing protective device such as headphones or earplugs.

In the case of work or maintenance operations which generate dust or substances harmful to your breathing, use suitable D.P.I.

Sound Levels

CAUTION!

Observe the regulations in force in your Country regarding the acoustic protection to be used

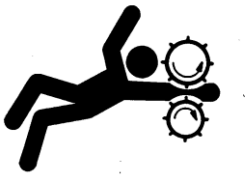
In some circumstances the noise level produced may exceed 85dbA÷90dbA. In these cases it is advisable to use suitable personal protection equipment.

85dbA÷90dbA

Safe machine mainenance

Tie back long hair. Do not wear necktie, scarves, loose clothing, or necklaces when operating the machine or moving parts. Severe injury can be caused if these items get caught in the machine.

Remove rings and other jewellery to prevent electrical shorts and entanglement in moving



Keep away from rotating parts of the transmission

Entanglement in rotating shafts can cause serious injury or death.

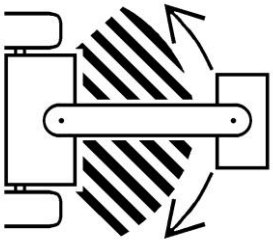
Make sure that tractor and drive shaft guards are always mounted and that rotating guards can rotate freely.

Wear close fitting clothing. Stop the engine and make sure the PTO transmission shaft has come to a complete stop before performing adjustments and connections, and before cleaning PTO controlled equipment.

Range of action of the machine

The range of action of the machine is to be considered a hazardous area: before operating the machine, make sure that there are no people or animals within the borders of the work area. If any are present, stop the machine and remove them.

The user of the baler is liable towards third parties for damage caused by the machine within this range.



Dangers associated with high pressure

Splashes of liquid under pressure can penetrate the skin and cause serious injury.

To avoid personal injury, relieve pressure before disconnecting hydraulic hoses or other lines. Tighten all fittings before restoring pressure.

Use a piece of cardboard to identify leaks.

Protect hands and body from high pressure liquids. In case of injury, contact a doctor immediately.

Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Medical personnel unfamiliar with this type of injury should consult appropriate medical documentation.

Hydraulic couplings must always be perfectly clean. Always cover them with the plastic protective caps supplied after each use to avoid getting them dirty or damaging them.

Check and, if necessary, replace any damaged pipes or fittings. All flexible hoses should be replaced after 5 years from the date stamped on the hose.

Complying with maximum transport speed

IMPORTANT!

Maximum transport speed is determined by the local highway code and the capabilities of this machine.

When driving on public roads, always comply with road rules.

When towing this machine at transport speed, do not exceed its gross weight (GVW).

Some tractors are able to operate at higher speeds with respect to the maximum transport speed of this machine. Regardless of the maximum speed that the tractor used to tow this machine can reach, do not exceed the maximum machine transport speed.

IMPORTANT!

Exceeding the speed of transport of the machine can result in:

- **loss of control of the tractor/machine unit**
- **reduction or total absence of braking**
- **damage to machine tyres**
- **damage to structure or components of the machine**

When towing loads on surfaces in poor condition, around corners or on slopes, proceed with caution and further reduce speed.

Ballast, wheel distance and tyre inflation check

Make sure that the ballast, the distance of wheels and tyre inflation are suitable to the type of tractor and that they ensure proper machine stability in all conditions, especially for use on hilly terrain and in adverse conditions. Consult the tractor operator's manual.

Use lights and safety devices

Prevent collisions with other road users, slow tractors with mounted or trailed equipment and self-propelled machinery. Frequently check vehicles arriving from behind, especially before turning corners, and use turn signals.

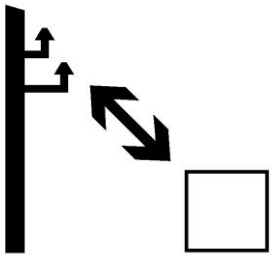
Use the headlights, turn signals and warning indicators both at night and during the day. Comply with road rules regarding lighting vehicles and various signalling. Maintain lights and different signalling means visible and in good condition.

Replace or repair lighting and damaged or lost signalling devices.

Electrical lines

Be very careful to keep a minimum safe distance when operating near electric power lines. The machine is mainly constructed of metal; therefore, if it should come in contact with electrical lines or there is a discharge between the line and the machine, the operator risks fatal harm.

In the case of operation in the vicinity of electric power lines, contact the authority responsible for power distribution.



Keep heat sources away from pressurised fluid tubes

The heating of tubes containing fluid under pressure can cause a spray of flammable vapour, causing severe burns to the person working and to people around.

During welding or brazing operations or when using open flames, do not heat the areas near the pressurised fluid tubes or other flammable materials. The heat in the area just beyond the tip of the flame can cause the accidental explosion of pressurised tubes.

Support the machine properly

Before performing any work on the machine, always lower the component or equipment to the ground.

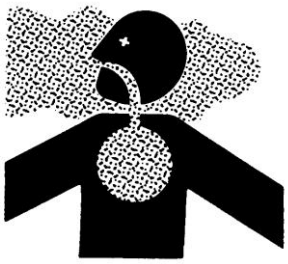
Provide adequate support if the servicing to be performed requires machine or equipment lifting.

Hydraulically supported devices, if kept in the raised position, may settle or drop because of leakage.

Do not use cinder blocks, bricks or other material that could give out under a continuous load to support the machine. Never work under a machine supported only by a jack. Always follow the instructions in this manual.

When using equipment or accessories together with the machine, always follow the safety precautions listed in the accessory or equipment operator's manual.

Removal of paint before welding or heating



Avoid potentially toxic fumes and dust.

The heating of paint during welding operations or when using a flame can generate hazardous fumes.

Before heating:

- Remove paint over an area of at least 100mm in diameter around the point that will be affected by heating. If you cannot remove the paint before heating or welding, wear an approved respirator.
- Do not breathe in dust when you sand or grind paint. Wear an approved respirator.
- If using a solvent or paint stripper, remove residues with soap and water before starting welding operations. Keep solvent or paint stripper containers away from other flammable material.

  Allow fumes to disperse for at least 15 minutes before welding or heating.

Do not use chlorinated solvents in welding areas.

Perform all work in a well-aerated area where toxic fumes and dust can be vented.

Properly dispose of paint and solvent

Avoid applying high pressure on safety labels

Pressurised water can damage or remove safety labels. Avoid applying high pressure directly on safety labels

Immediately re-apply missing safety labels or replace damaged ones. Spare safety labels are available from your **FERABOLI** dealer.

Avoid applying high pressure on cylinders

.

Avoid applying high pressure directly on cylinders, because pressurised water can damage cylinders.

Cardan shaft safety

Each cardan shaft is equipped with a safety system to protect mechanical parts against high starting torque and maximum torque:

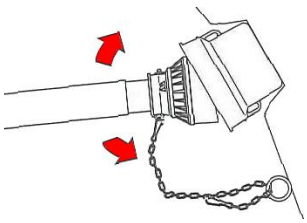
- **LR** = with automatic torque limiter.
- **SB =** with shear bolt**.**

LR

SB

Cardan safety chain

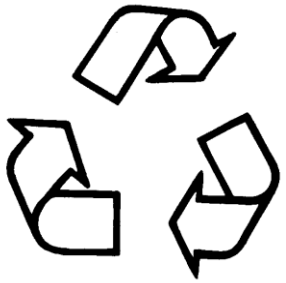
Prevents cardan shaft guard rotation during work. Fasten to the steering head.



Ecology and pollution

Respect the laws in your country concerning the use and disposal of products used for machine operations, maintenance and clearing.

Improper disposal of waste can threaten the environment and ecological system. The components used for **FERABOLI** equipment which are potentially hazardous waste include: oil, brake fluid and filters.



Use airtight containers for drained fluids. Do not use food or beverage containers that may mislead and cause accidental drinking.
Do not drain onto the ground, into sewage systems or in watercourses.

Dispose of any remaining machine packaging in suitable sorted waste containers.

Consult the relevant authorities for disposal or recycling centres. If the machine is scrapped observe the anti-pollution laws of your Country.

Residual risks

In spite of the fact that many risks have been examined and, where possible, the necessary precautions taken to reduce the risks involved during the working phases of the machine, there still remains a series of residual risks. These are listed below:

Risk of crushing, dragging, shearing, death	in the instance of contact with the moving parts of the machine during the working phase: • **IT IS PROHIBITED TO CROSS THE WORKING AREA DURING OPERATION.** • **IT IS PROHIBITED TO CLIMB ABOARD THE MACHINE WHILE ITS PARTS ARE IN MOTION..**
Risk of collision	With the moving parts of the machine during work: • **IT IS PROHIBITED TO CROSS THE WORKING AREA DURING OPERATION.** • **IT IS PROHIBITED TO CLIMB ABOARD THE MACHINE WHILE ITS PARTS ARE IN MOTION.**
Risk of crushing, shearing, entanglement.	In the instance of contact with the moving parts of the hydraulic lifting system with hydraulic operated rear sliding tailgate: • **IT IS PROHIBITED TO STAND WITHIN THE WORKING AREA OF THESE DEVICES.**

4. SPECIFIC SAFETY REGULATIONS

Safe baler use

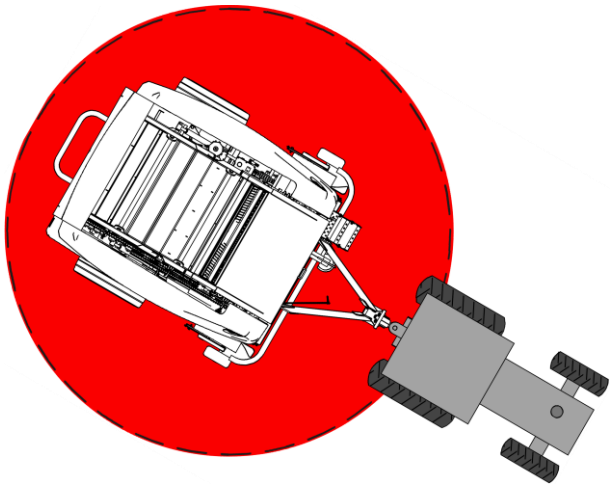
WARNING!

- **Never leave the machine unattended during operations.**
- **Never leave the tractor unattended with the engine running.**
- **Do not allow the use of the machine by children or unqualified persons, or anyone not in good health or not in possession of a valid driver's license.**

Before use, always check road conditions and general safety conditions of the machine.

WARNING!

Always perform the following operations before entering the working area of the machine:



- **Disconnect the power take-off (PTO).**
- **Stop the tractor engine.**
- **Remove the main switch key.**
- **Engage the parking brake.**
- **Wait for all moving parts to come to a complete stop.**
- **Switch off the ICON Control system.**
- **Relieve** hydraulic **pressure.**

During machine operation, the presence of persons near moving parts is strictly prohibited, as is touching moving parts or standing between them. Keep your face, hands and feet away from moving parts. Keep at a safe distance.

WARNING!

To avoid serious injury or death caused by remaining caught in the machine, DO NOT attempt to manually feed product, twine or net into the baler with hands or feet or with the aid of any other objects and do not unclog the feeding zone WHILE THE BALER IS IN MOTION.

The machine feeds product faster than it can discharge it.

In the event of product flooding in the feeding zone:

- **Stop the tractor, remove the keys from the dashboard and wait for all moving parts of the machine to come to a complete stop.**
- **Switch off the ICON Control system.**

Circulation on the road

IMPORTANT!

Never circulate on public and/or private roads with a bale in the baler chamber. Always empty the chamber before leaving the field and make sure that the hatch is closed and locked.

Before towing the machine, withdraw the locking unit in the transport position.

Bale expulsion/discharge danger

Do not stand behind the machine. The hatch may be open and the bale may eject.

Discharge bales on flat ground or in a suitable position, in the case of sloping ground.

Tailgate safety lock device

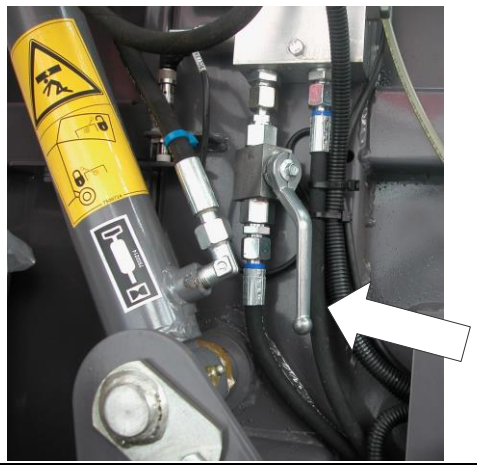
There is a safety measure to lock the tailgate when it's open, to avoid its accidental closure when the operator is inside the machine to perform maintenance and/or repairs.

When the tailgate is open, adjust the "L" lever placed on the block valve to the standstill position **(closed lock).**

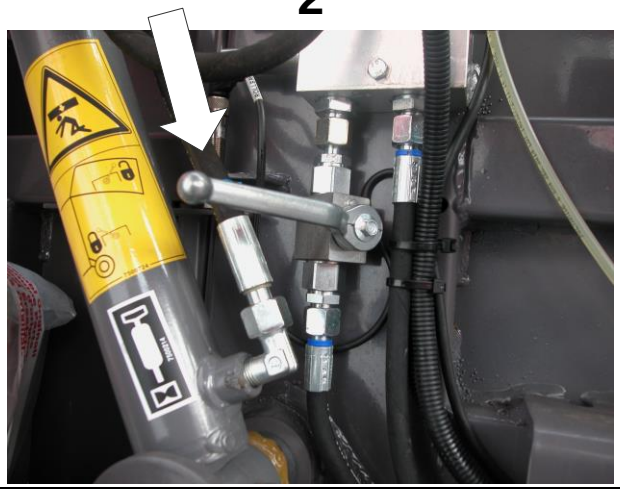
With the tailgate opened, lock the safety tap (cock) that prevents the accidental descent of the tailgate.

- **Position 1 = OPENED (free tailgate)**
- **Position 2 = CLOSED (locked tailgate)**

1



2



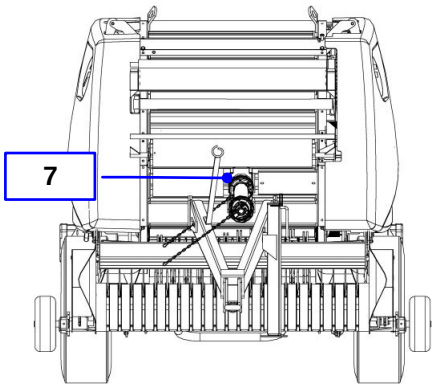
IMPORTANT!

Remember to reopen the safety tap before closing the tailgate in order to avoid causing serious damage to the structure of the Round baler.

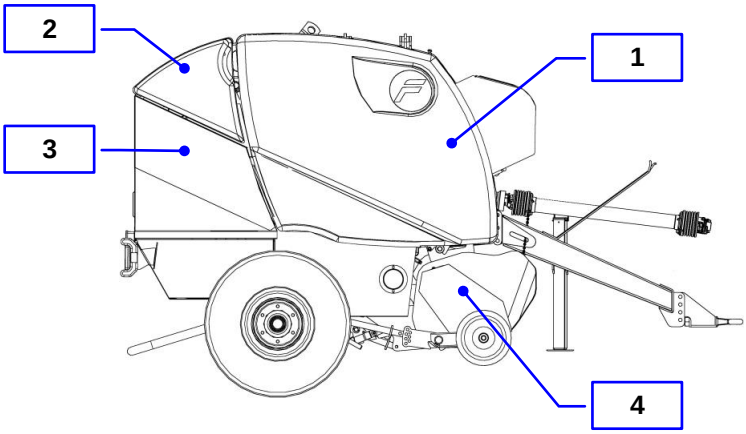
Covers

The machine is equipped with covers. These protect the operator from moving mechanical parts and shelter these same mechanical parts from any accidental intrusion of debris.

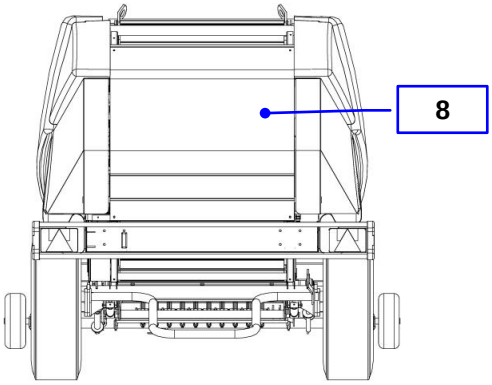
FRONT view



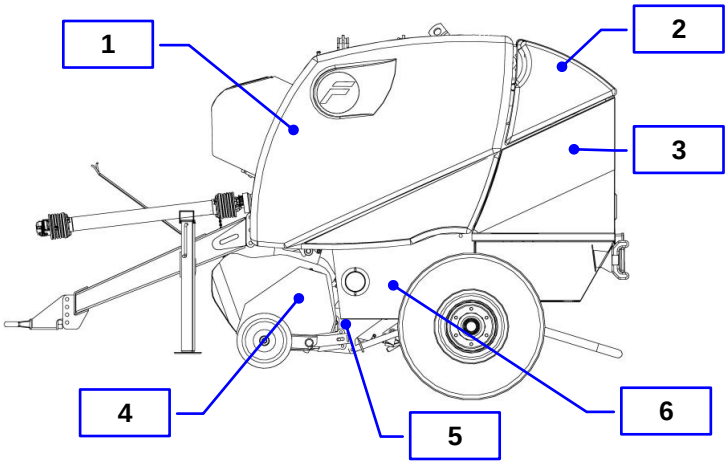
RIGHT side



REAR view



LEFT side



1) Front side covers
2) Upper rear side covers.
3) Lower rear side covers.
4) Pick-up covers.
5) Pick-up security cover
6) Large roll cover
7) Cardan shaft / gear box protective guard
8) Tailgate cover.

The lateral gull-wing door protection guards are provided with a safety lock that ensures perfect closing of the protection guard with the machine and thus prevents accidental opening during work or transport.
To open the protection guards a 13mm spanner is required.

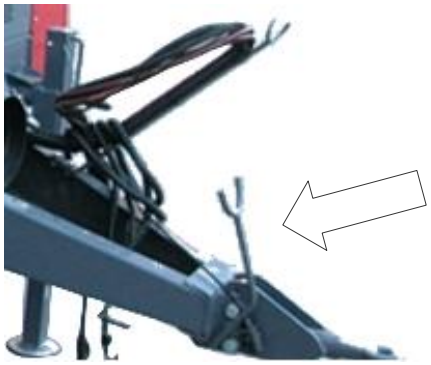
WARNING!

Before removing any covers or protective shields:

- **Stop the machine.**
- **Switch off the tractor and remove keys from the tractor dashboard.**

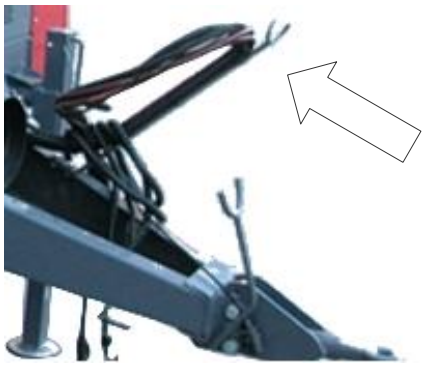
Cardan support

Supports the shaft when it is not connected to the tractor to prevent damage to it.



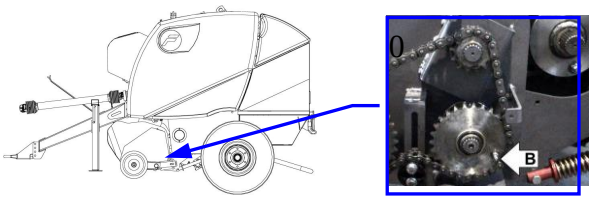
Rod holder support and guide

Hydraulic hose, electrical cable and wiring support.



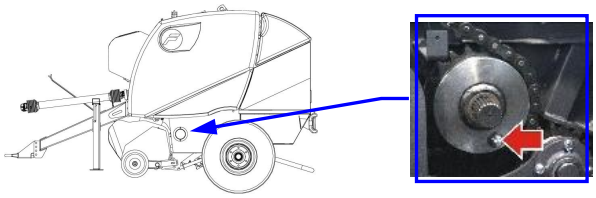
Pick-up transmission safety

The feeding device motion transmission is equipped with a safety with two shear bolts against overloading and foreign bodies.



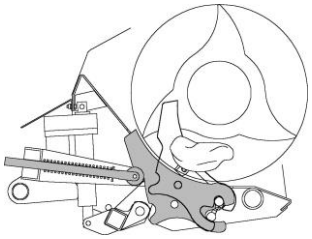
Mechanical Transmission safety device for rotor

The drive transmission to the rotor is provided with a shear bolt which protects against overloads and foreign matter.



Blades safety

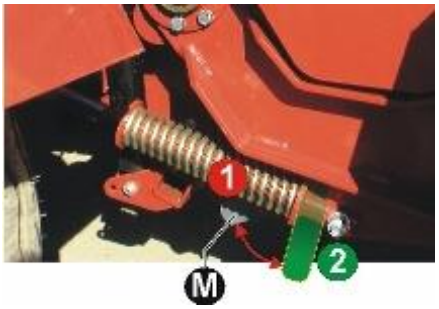
As protection against the entry of foreign bodies into the machine (stones, sticks, etc.) that may cause the blades to break, each blade is mounted on a retractable spring system that allows the blade to lower automatically and then to return automatically to the work position.



Knife securing device lock

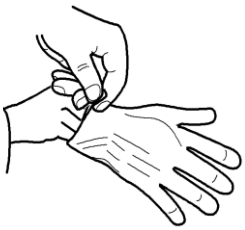
The handle **"M"** secures the knives of the cutting system during operation to prevent them from accidentally entering the bale forming chamber:

- **"Position 1" = knives secured.**
- **"Position 2" = knives free.**



Managing the binder blades and knives

Wear safety gloves when managing binder blades and knives.



In case of fire

WARNING! RISK OF FIRE

Regularly remove the accumulated product to reduce the risk of fire and to prevent material from twisting around mechanical machine components.

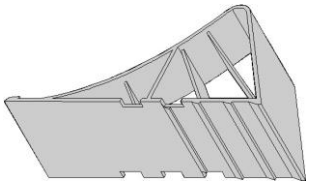
If the bale catches fire:

1. Immediately eject bale.
2. Move the tractor and baler as far away as possible from flammable material, making sure the wind does not blow the fire in the direction of the machine.
3. Lift the hatch and insert the locking device.

To extinguish the fire, use a pressurised water fire extinguisher or an alternative water supply.

Parking wedges

Positioned under tyres to block the machine and prevent any accidental movement while parked and any time the machine needs to be blocked for repair, maintenance or cleaning operations.



5. PICTOGRAMS

Safety symbols / Pictograms

Adhesive signs containing important messages for personal safety are affixed on the machine. Their purpose is to call the operator's attention to safety and health guidelines, as well as to possibly dangerous work and maintenance situations.

These safety signs are black and red pictograms on a yellow background.

They should always be kept clean and legible and must be replaced immediately whenever they have been removed and/or damaged.

When putting on new ones or painting areas where they were present, safety signs must be replaced as they were found originally.

For this purpose, each adhesive contains a Spare Parts Service order code number. When requesting adhesive safety signs from our Spare Parts Service department, specify relative codes.

To receive the full range of safety signs stickers for the baler, request the following code from our Spare Parts Service department: "7Z00077 = CE Safety decal"

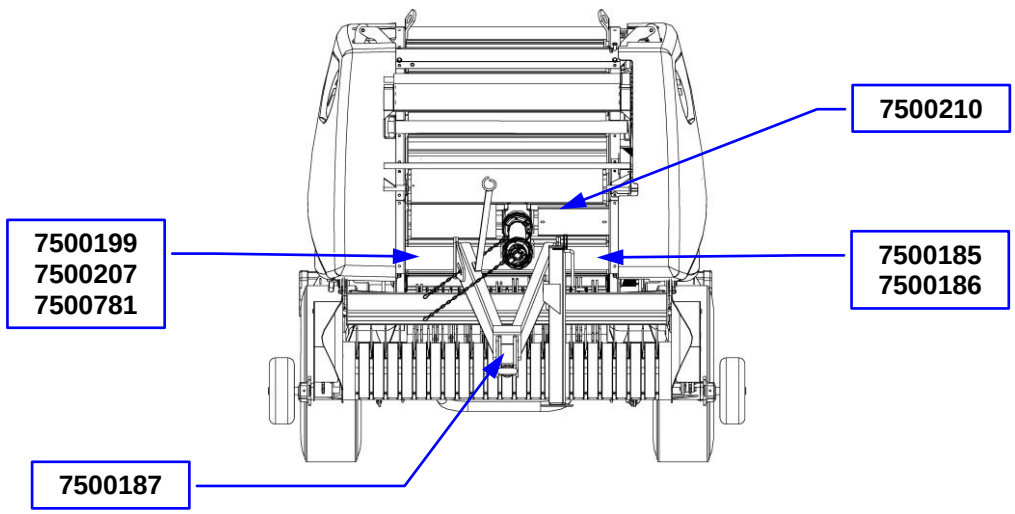
All safety signs decals on the baler are shown and described on the following pages.

Read and understand the meaning of the signs and disseminate this information to your staff and anyone else who may approach the machine during work or maintenance.

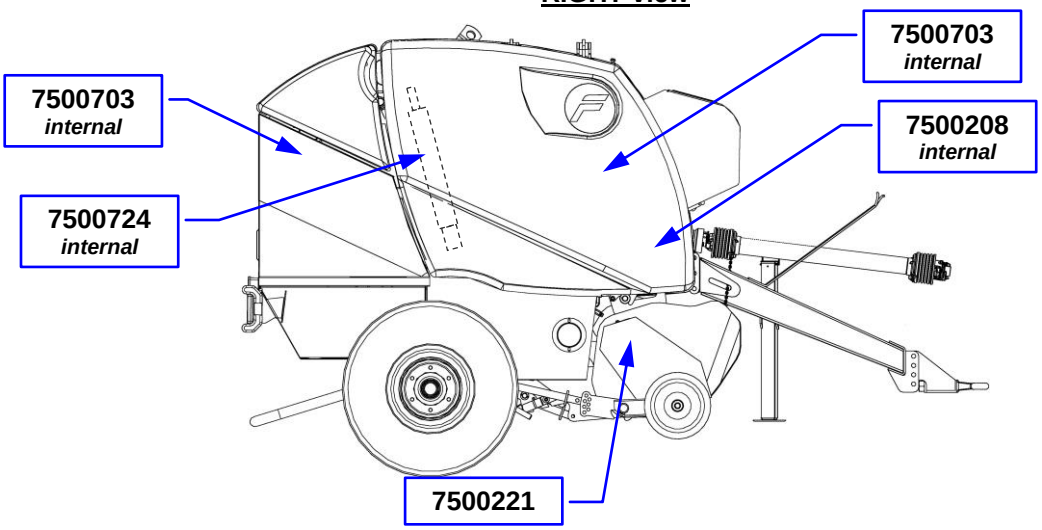
Read and understand the meaning of the signs and disseminate this information to your staff and anyone else who may approach the machine during work or maintenance.

Pictograms position on the round baler.

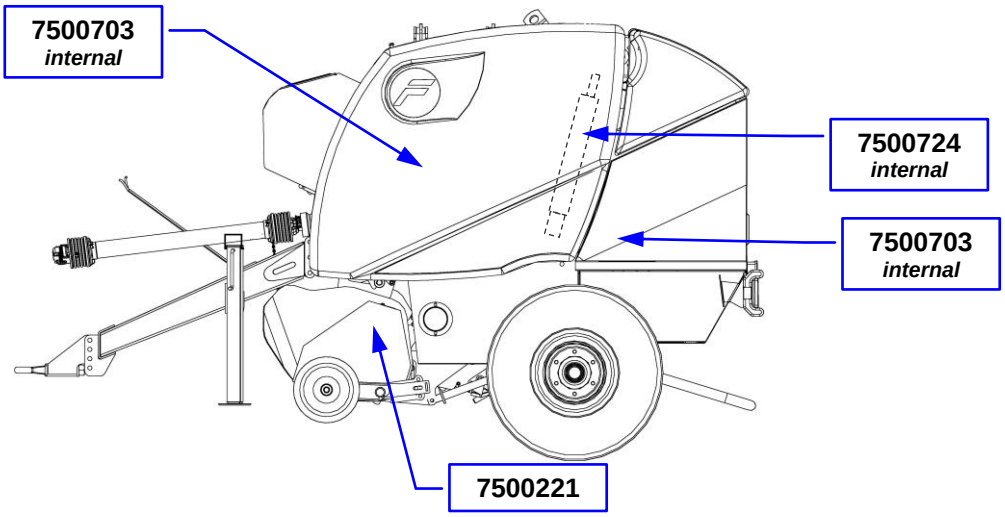
FRONT view



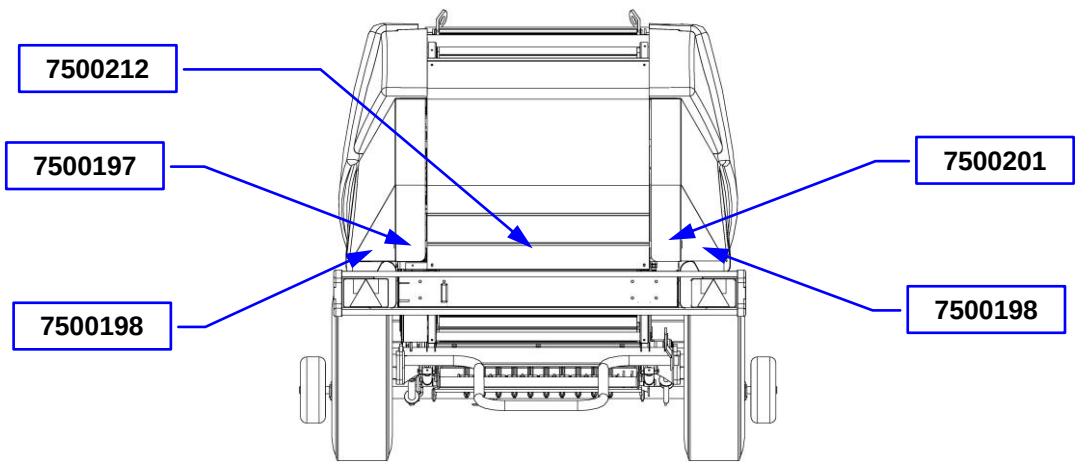
RIGHT view



LEFT view



REAR view



cod. 7500185 – Operator's manual

Before operating the machine, at the beginning of each season and before working on the machine, read and keep in mind the use and maintenance instructions in the operator's manual.

cod. 7500186 – Repairs and maintenance

CAUTION! Before doing maintenance or repairs on the machine, switch off the tractor engine, remove the keys from the dashboard and read the operator's manual.

cod. 7500187-1 – PTO rpm

CAUTION! Machine suitable for tractors with PTO a 540rpm/1' and direction of rotation.

cod. 7500197 – Lifted hatch

WARNING! Do not stand behind the machine to avoid being crushed by sudden manoeuvres.

cod. 7500198 – Opening the hatch

WARNING! Do not move or stand under the hatch when it is lifted unless the appropriate safety catches have been inserted, to avoid crushing.

cod. 7500199 – Maneuvering area

WARNING! Do not enter the manoeuvring area between the machine and the tractor when the motor is running. This area is particularly dangerous.

cod. 7500201 – Electrical lines

WARNING! Take great care when working near electrical lines.

cod. 7500203 – Moving parts

WARNING! Before performing any work, wait for all parts of the machine to come to a complete stop and prevent any unwanted movement using appropriate equipment.

cod. 7500207 - Feeding

WARNING! Never hand feed or remove material in front of the pick-up collector as long as parts are moving. This could cause entrapment of the upper limbs or more severe injury to persons.

cod. 7500208 – Hydraulic system

WARNING! Consult the operator's manual before working on the hydraulic system.
Pressurised oil can cause serious infections.

cod. 7500210 – Upper limbs crushing

WARNING! Do not remove the guards and do not touch parts, which may also suddenly move under their own weight and cause crushing of the upper limbs..

cod. 7500212 – Bale ejection

WARNING! Do not stand behind the machine when the bale is ejected. Keep at a safe distance.

cod. 7500221 – Danger of crushing / cutting

WARNING! Do not get too close to the machine, as this could cause crushing or cutting of the lower limbs, due to the weight or lowering of the machine.

Keep a safe distance.

cod. 7500724 – Safety lock

WARNING! Before entering the bale forming chamber to do any operations or for other reasons, lock the hydraulic jacks by turning the valve to the closed position..

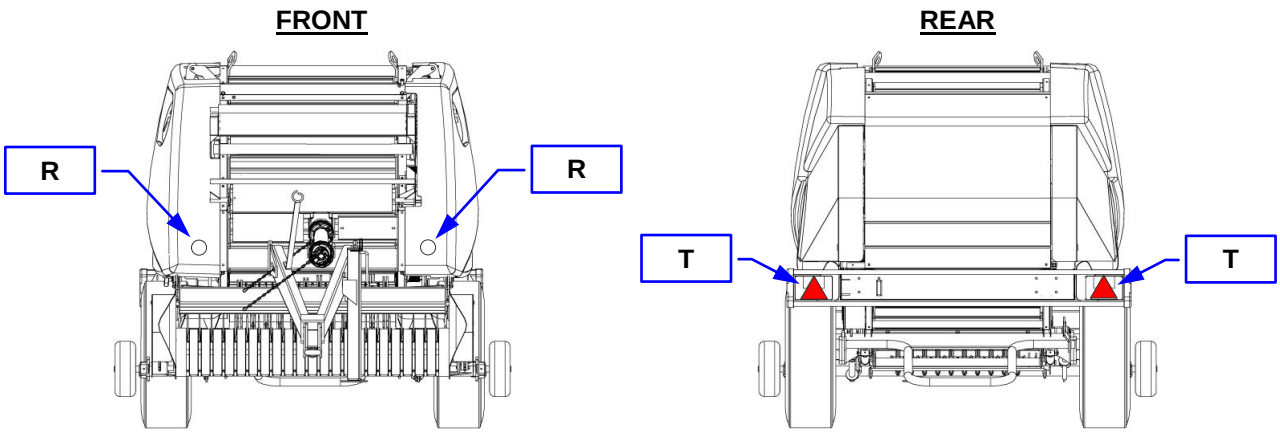
cod. 7500781 – Cardan shaft dragging

WARNING! Danger of getting caught and being dragged by the cardan shaft.

Reflectors

Two types of reflex reflectors are located on the round baler so that it can be seen more clearly during road transport:

- ***R)*** Round reflectors (front).
- ***T)*** Triangular reflectors (rear).



6. PREPARING THE TRACTOR

WARNING!

Take extra care as tractor connection operations can be dangerous.

Use a tractor with the appropriate characteristics for towing the machine in use.

Make sure that there are no objects resting on the machine and that there are no persons and/or animals in the immediate vicinity.

The machine steering head is equipped with a pivoting towing eye.

IMPORTANT!

Before adjusting the steering head, make sure that:

- **tyres are properly inflated**
- **the hatch is closed**

Adjusting the tow-bar

IMPORTANT!

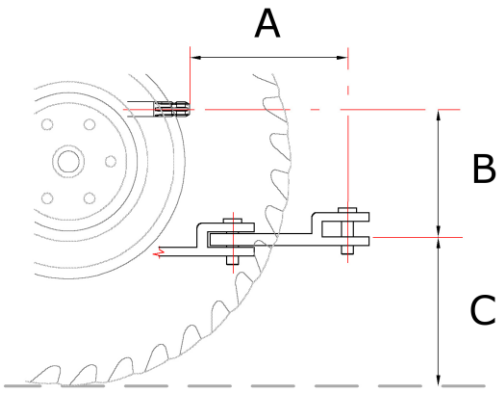
Adjust the tow-bar before attaching the baler. Reassemble all guards.

Machines exit **FERABOLI S.p.A.** with a "STANDARD" tractor connection.

If necessary, use of a "P" extension for standard attachment of your tractor is permitted within acceptable limits.

Adjust the tow-bar extension to the following specifications:

- between PTO shaft end and tow-bar attachment pin hole axis
  (A) = distance 300mm
- between PTO shaft and upper tow-bar surface
  (B) = distance .....160 - 290mm
- between ground and upper tow-bar surface
  (C) = distance 450mm



A = 300 mm
B = 160÷290 mm
C = 450 mm

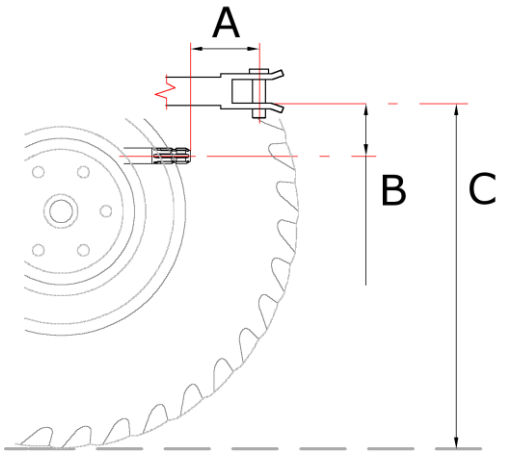
High attachment adjustment

It is possible to hook the baler also to tractors with a "HIGH" towing device, within acceptable limits, as shown in the figure.

To do so, you must adapt the baler steering head to attachment "A" of the tractor.

Adjust the high attachment to the following specifications:

- between PTO shaft end and tow-bar attachment pin hole axis
  (A) = maximum distance.....200mm
- between PTO shaft and upper tow-bar surface
  (B) = maximum distance.....200mm
- between ground and upper tow-bar surface
  (C) = distance .....800 - 1050mm



A max = 200 mm
B min. = 200 mm
C = 800÷1050 mm

CAUTION!

A high attachment can be used with a measurement of 800-1050mm.

CAUTION!

THE USE OF HIGH ATTACHMENTS WHEN DRIVING ON ROADS IS PROHIBITED IN ITALY!
When driving on roads, you need to restore the machine steering head with the standard attachment!

Selecting the tractor PTO regime

To select the tractor PTO regime, refer to the label on the front of the baler.
The direction of rotation is that which is indicated by the adhesive safety sign

Baler with PTO regime at 540 rpm/min:

The size of the tractor PTO shaft must be 3.5 cm (13/8 in.).

Consult the tractor operator's manual to install an appropriate PTO shaft and adjust PTO regime.

IMPORTANT!

Stop the PTO during reverse manoeuvres at the end of a swath and when steering at a very narrow angle.

Installing the control unit

Check that you have the following material contained in the box supplied with the machine:

1) Power cable
2) ICON control terminal
3) Suction pad

Positioning the suction pad

Fasten the suction pad stably inside the tractor cab.

Position the suction pad in the tractor cab so that the control unit can be easily reached, visible and available to the operator.

The control unit will then be engaged on the suction pad during operations.

Electrical circuit and baler power requirements

It is possible to connect the field wiring plug (DIN 9680) directly to the tractor female socket, provided that it can deliver 25÷30 AMP.

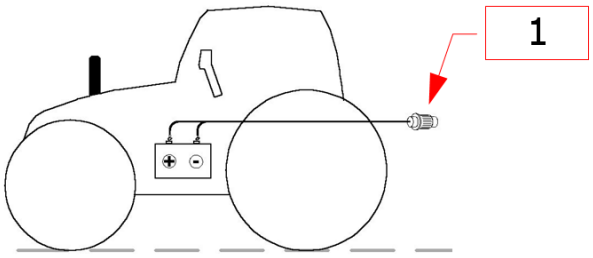
If during operations, the ICON control terminal shows abnormalities, we advise that you connect the supplied power cord "**1**" directly to the tractor battery. Then, connect the field wiring plug to the COBO socket on the power cord "**1**".

Connecting the power cord

<u>To connect the power cord</u>:

- with the tractor turned off, disconnect the ground wire from the battery,
- then connect the tractor's power cord "**1**" to the 12V battery terminals, by connecting the red wire (+) to the positive pole and the black wire (-) to the negative pole.

Now reconnect the ground wire.



<u>IMPORTANT</u>!

Be careful not to invert the poles:

- RED wire "+" (positive)
- BLACK wire "-" (negative)

- Fasten the "**1**" tractor power cable along the tractor, bringing the COBO connector to the height of the towing eye or near the PTO..

<u>IMPORTANT</u>!

Make sure that the tractor power cable, once connected to the machine cable, does not hit against the PTO and does not interfere with working operations.

7. PREPARING THE BALER

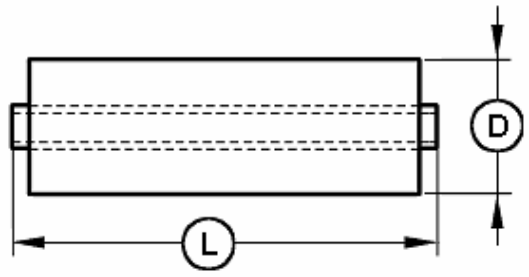
NET binder

Selecting the net roll

The baler is equipped for use with standard type reels.
For best performance, use 14÷16 g/m net rolls.
The round baler can use spools from 2000 to 3000 metres.
The hole inside the cardboard tube of the roll of net must be 75÷78mm.

IMPORTANT!

Higher density net rolls can be used. In this case, make sure that the net binding device is properly adjusted and the blade is sharp.
Net roll diameter "D" must not exceed 30 cm.



- **D = diameter, max 30cm**
- **L = length of the net holder tube until 1100mm**

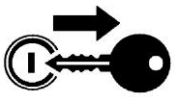
Taking care of the net roll

IMPORTANT!

Protect the net roll from humidity and impact. Do not remove the protective cover before use. Protrusions can cause erratic performance and affect bale weather resistance. Do not use tape directly on the net.
Store the roll in a cool, dry place away from direct sunlight.

Loading the net binder

WARNING!



Before installing the net binder, ,:

- **disconnect the PTO,**
- **engage the parking brake,**
- **stop the tractor engine and remove the key. Wait for all moving parts to come to a complete stop**

CAUTION!

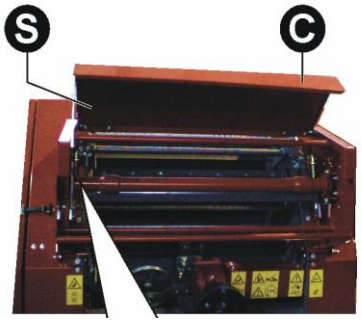
Pay close attention to the blade of the binder during any nearby operations.

The ICON control system needs to be turned on to move the binder arm in order to perform some of the operations described below.

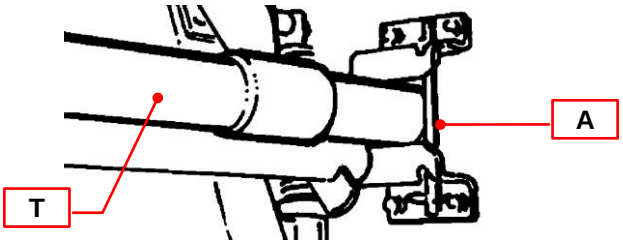
More information for turning on the ICON control system can be found under the "*ICON Control System / Main functions*" section; more information on moving the binder arm can be found under "*ICON Control System / Main functions / Net movement*"

- Accendere il sistema di controllo ICON
- Spostate il braccio del legatore all'interno della camera.

- Lift cover **"C"** and rest it on the support **"S"**.



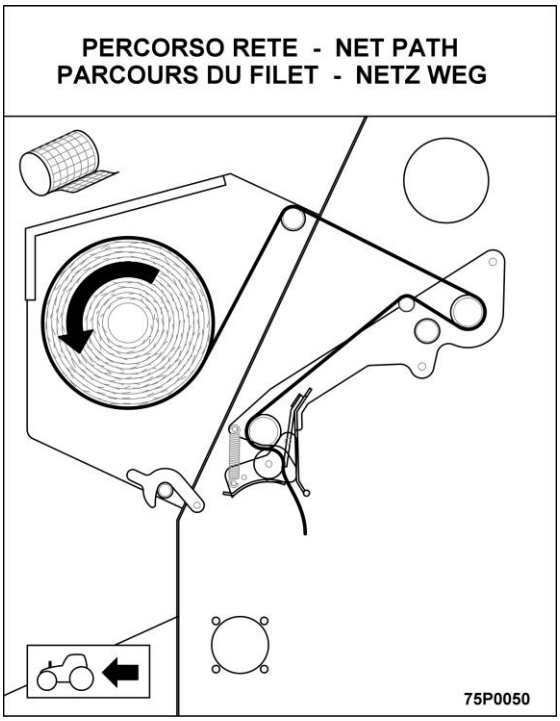
- Extract the pin **"A"** that secures the tube holding the net roll net and make the tube **"T"** come out in order to insert the roll.



- Insert the net roll on the appropriate net holder tube and reposition it.
- Secure it again with the previously removed "A" safety pin.

IMPORTANT!

Take great care to push the net roll onto the tube correctly so that it rotates in the right direction as shown on the decal.



- Lower the cover "**C**" again.
- Raise the net holding box **"G"** completely.

- Braid the ends of the net and pass it onto the rollers according to the position indicated on the sticker applied to the machine.
- Then, complete the insertion of the net in the lower part of the path and let approximately 20cm of the net hang.
- Lower the net holding box “G”r.

- After having positioned the net into the rolls, and before starting to work, return the binder arm to a resting position.
- Switch off the ICON control system.

8. CONNECTION AND DISCONNECTION

CONNECTION

WARNING!

Take extra care as tractor connection operations can be dangerous.

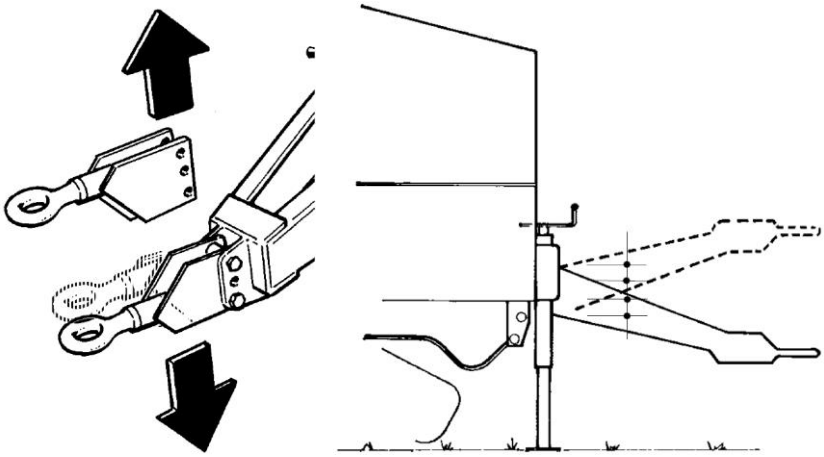
Take heed of all basic safety regulations, as contained in chapters "General safety regulations" and "Specific safety regulations".

Use a tractor with the appropriate characteristics for towing the machine in use.
Make sure that there are no objects resting on the machine and that there are no persons and/or animals in the immediate vicinity.
The machine steering head is equipped with a pivoting towing eye.

The baler steering head can be adapted to the tractor towing device, which can be "STANDARD" or "HIGH".
In any case, the towing eye must always be parallel to the ground.

Steering head / towing eye adjustment

Towing eye can be adapted to the tractor's towing attack and to the cardan shaft position by adjusting its height or turning it upside down.
The machine steering head can be adapted to the tractor only vertically. In upside down position it can be used with the "**HIGH**" tractor's towing attack.



WARNING!

Take extra care as steering head and towing eye adjustment operations can be dangerous.

To avoid injury from unexpected movement, support the machine firmly on flat, horizontal ground.

Take heed of all basic safety regulations, as contained in chapters "General safety regulations" and "Specific safety regulations".

IMPORTANT! It is permitted to use the high hook up with a measurement of 800÷1050mm.

WARNING!

THE USE OF HIGH ATTACHMENTS WHEN DRIVING ON ROADS IS PROHIBITED IN ITALY!

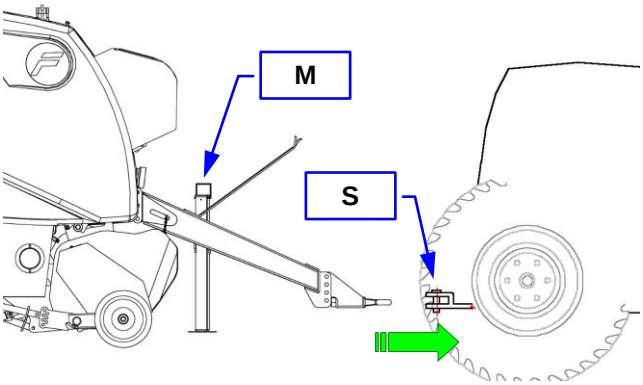
When driving on roads, you need to restore the machine steering head with the standard attachment!

IMPORTANT!

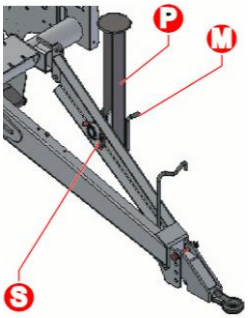
Place the drawbar / towing eye so that it can be kept always parallel to the ground

Tractor connection

- Hook the baler to the rear hook of the tractor, making sure that the machine is in a stable and horizontal position and that the towing eye is at the same height as the tractor towing device.
- Turn crank "M" of the servo steering head to lower or raise the towing eye to obtain correct alignment with the tractor towing device.
- Insert cotter "S" in the towing eye and secure it with a safety pin. Then lift the servo steering head with the crank "M".



- Remove the locking pin **"S"** and completely raise the parking jack **"P"** turning the handle **"M"**.
- Turn all the way up and lock the parking jack **"P"** in the transport position by inserting the locking pin **"S"** into the special position ad shown in the image



- Then remove any wedges from under the wheels.
- Insert the road transport light system power plug of the baler into the tractor outlet and verify proper functioning of all turn signal, parking and brake lights.

- Make sure that the tailgate and all covers are properly closed and hooked.
- Make sure that the pick-up is in the raised position.

IMPORTANT!

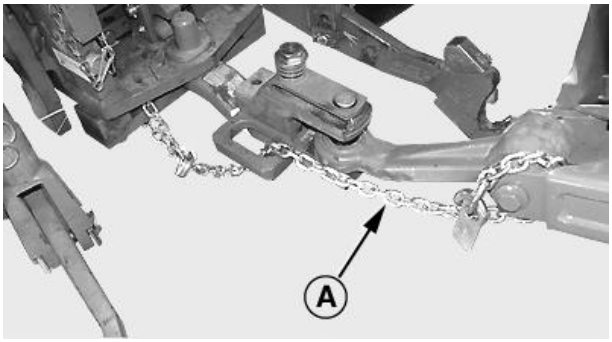
When driving on public roads, always comply with local road rules.

Remember that you must have the vehicle registration document, and must have applied a duplicate license plate in the space provided on the baler.

Hooking the safety chain (**only in countries where it is expected)**

If the machine is equipped with a safety chain (A), hook and fasten the chain (A) to the tractor.

Allow only enough slack for turns.



CAUTION!

The chain must stop the steering head from hitting the ground in the event that the baler accidentally becomes removed from the tractor.

Connecting the telescopic shaft to the PTO shaft of the tractor

CAUTION!

The cardan shaft is a transmission component (machine), equipped with a "CE" certificate.

Each cardan shaft is equipped with a use and maintenance manual. Always carefully follow information and safety standards supplied for shaft use as contained in the manual.

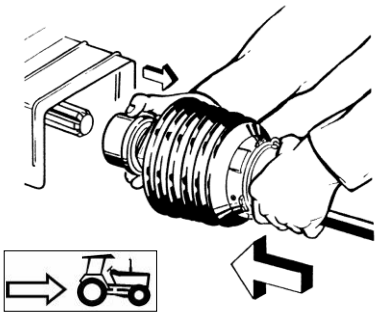
- **Never connect the telescopic shaft when the tractor is moving.**
- **Never use an iron hammer to connect or disconnect the telescopic shaft from the PTO.**

IMPORTANT!

The ribbed profiles of the telescopic shaft and of the PTO must always be free of any paint, dirt, chaff or burrs.

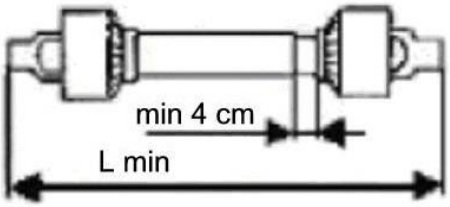
Be very careful when connecting the shaft. Check that it is properly locked on the PTO.

The cardan shaft attachment, on the tractor side, is highlighted by a decal on the cardan itself.

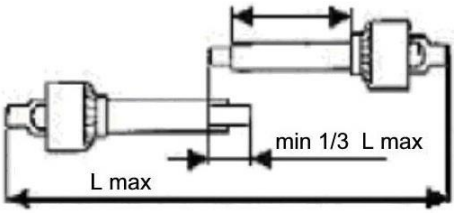


Check that the length never exceeds the minimum distance between the machine and the tractor (risk of jamming).

Minimum clearance must be 4cm.



When the cardan shaft is fully extended, the telescopic shafts must overlap by at least 1/3 of their length in all working conditions.



Before starting operations:

- Verify that the safety buttons and screws are properly engaged in the PTO grooves and make sure that the protection turns freely, otherwise it will need to be greased.
- Verify that the appropriate safety chains are present on guards to prevent guards from rotating with the cardan shaft.
- Verify protective caps often and, if they are not completely in good condition, replace them immediately with new protections.

WARNING!

After all maintenance operations performed on the cardan shaft, always reset protective caps on the shaft itself.

During baler operations, replace the cardan shaft support along the steering head side.

FERABOLI S.p.A. declines any responsible for any consequences of failure to heed warnings.

Cardan shaft decal

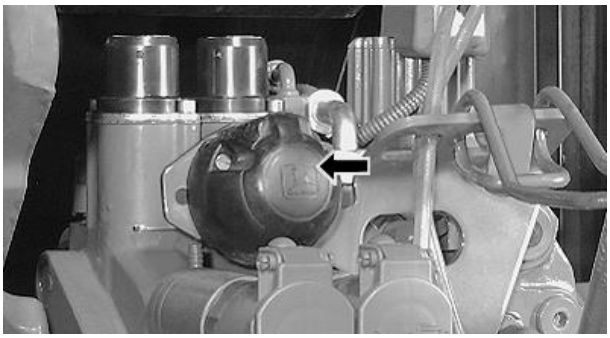
There is a sticker on the cardan shaft which requests the operator complies with safety standards for shaft use.

FERABOLI S.p.A. declines any responsible for any consequences of failure to heed warnings.

C Connecting the seven-contact outlet for towing

Connect the road driving light outlet to the seven-contact outlet of the tractor.

The electrical cable of the road driving lights of this machine meets the requirements of ISO 1724



Connection to the hydraulic system of the tractor

WARNING!

The maximum working pressure in baler flexible hydraulic hoses is approximately 20,000 kPa (200 bar; 2900 psi).

- **To prevent accidents due to the splashing of fluids under pressure, before connecting or disconnecting hydraulic hoes or other fluid hoses, stop the engine and discharge pressure from the hydraulic system.**
- **Tighten all joints before restoring pressure.**

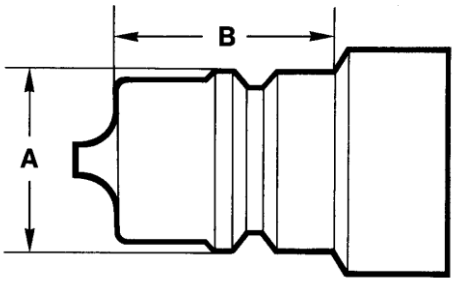
IMPORTANT!: All hydraulic attachments must be free of dirt, dust or sand. Protect openings with plugs until connected. Debris can damage the hydraulic system.

NOTE: The baler is equipped with ISO hydraulic attachments.

If these are not suitable for tractor attachment joints, contact your **FERABOLI** dealer for proper attachment joints.

(A) = diameter ..... 23,66 ÷ 23,74 mm

(B) = length ..... 24 mm



A = diameter
B = length

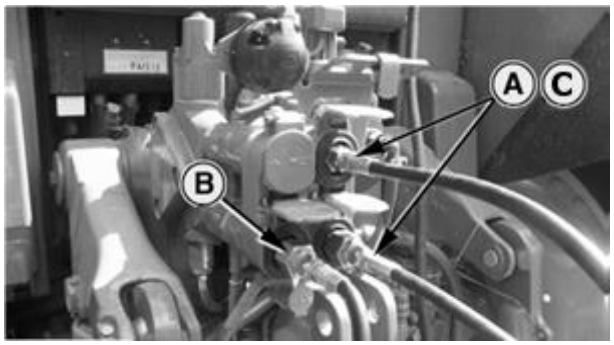
Connecting flexible hydraulic hoses for lifting the collector and hatch

- Using force, insert the ends of the hoses in the tractor attachments.

  Connect the hydraulic hoses "A" to a double acting valve to open and close the door and to manage pressure.

  When the tractor hydraulic distributor lever of the tractor is moved back, the door will be opened.

- Connect the hydraulic hoses "B" to a double acting valve for lifting the collector (pick-up), to open and close the tape and cut to manage the cut group (inserimento e disinserimento).



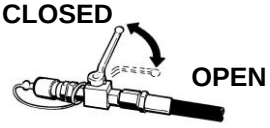
NOTE: When you move backwards the tractor hydraulic distributor lever, you can lift the collector (pick up). This is the usual command.

If, instead, TAPE or CUT procedures are activated through the ICON control system, you can open/close the tape or move the cut group.

To connect the flexible hydraulic hose “B” to the recommended outlets, please refer to the tractor Operator's Manual.

Before lifting the pick-up:

- Position the stop valve lever to the "OPEN" position and then left it (transport position).
- Then turn the valve lever to the "CLOSED" position to lock it.



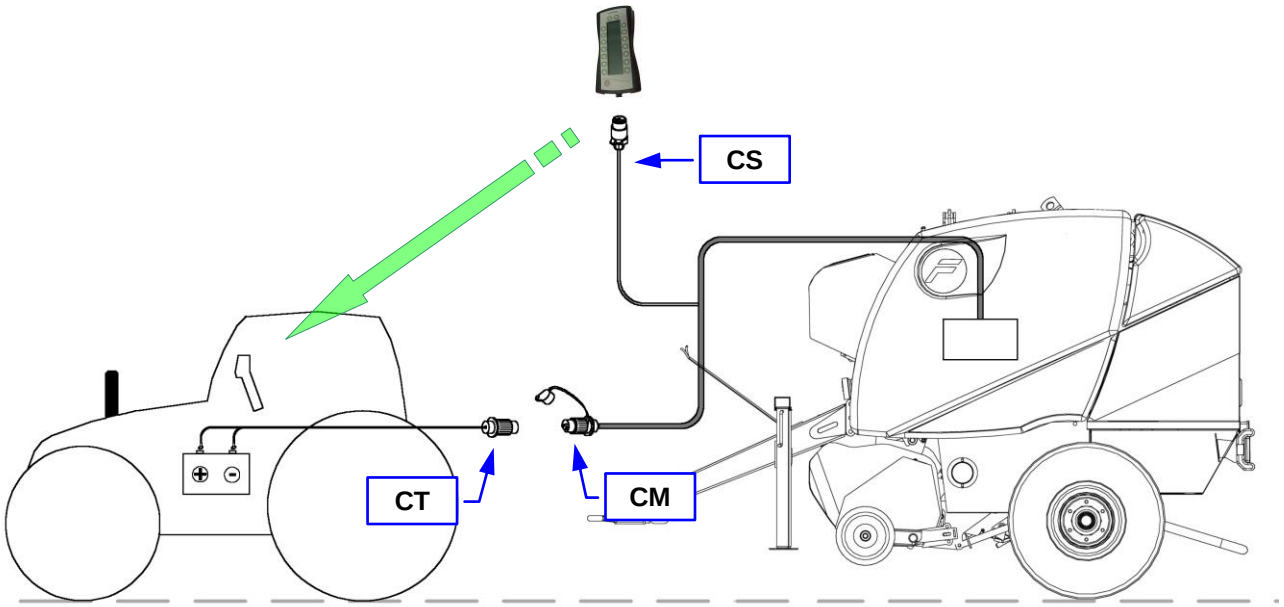
Installing and connecting baler wiring to the ICON control terminal

IMPORTANT!

Make sure that no cables are a hindrance to driving maneuvers and are not near moving parts.

Make sure that the tractor power cable, once connected to the machine cable, does not hit against the PTO and does not interfere with working operations.

- Connect the signal cable "CS" (equipped with 24-pole rectangular connector) to the control unit plug and tighten the ring nut.
  Then insert the control unit in the dovetail that was previously installed in the cab.
- Connect the machine power cable "CM" with the tractor power cable "CT."
  Make sure that the tab of the COBO female connector cover of the machine power cable is engaged in the COBO connector slot of the male COBO connector of the tractor power cable.
  This will prevent accidental disconnections of the two cables which would result in a system black-out.
- Now verify that the control unit switches on by pressing the relative button. If cables have been properly connected, the system will switch on.



Further information about how to turn on the ICON control system are described in chapter “ICON Control System / Main functions”.

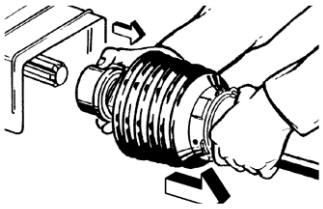
DISCONNECTION

Disconnecting the cardan shaft from the PTO shaft of the tractor

Disengage the PTO, engage the parking brake, stop the engine and remove the ignition key.

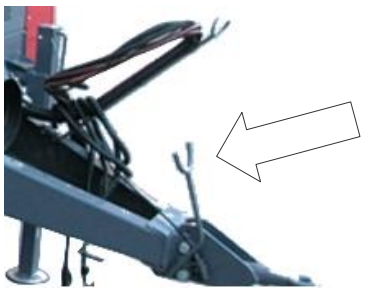
To disconnect the telescopic shaft properly from the PTO shaft, refer to the telescopic shaft operator's manual.

Replace all protections, if removed.



Repositioning the cardan shaft

When adjusting the baler steering head for use with the tractor towing hook, position the support as shown in the figure, so as to rest the telescopic shaft on itself.



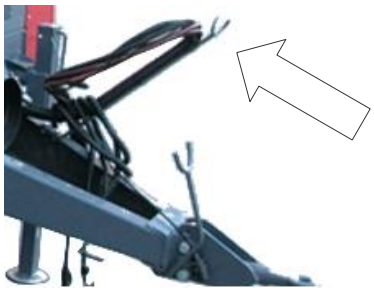
Arranging the flexible hydraulic hoses

CAUTION!

Splashes of liquid under pressure can penetrate the skin and cause serious injury. To avoid personal injury, relieve pressure before disconnecting hydraulic hoses or other lines.

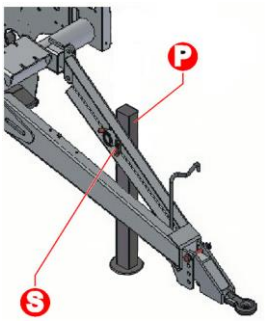
Disconnect the flexible hydraulic hoses and install caps on the attachment joints.

Arrange the flexible hydraulic hoses in their relative support to keep them clean, preventing them from coming into contact with the ground.



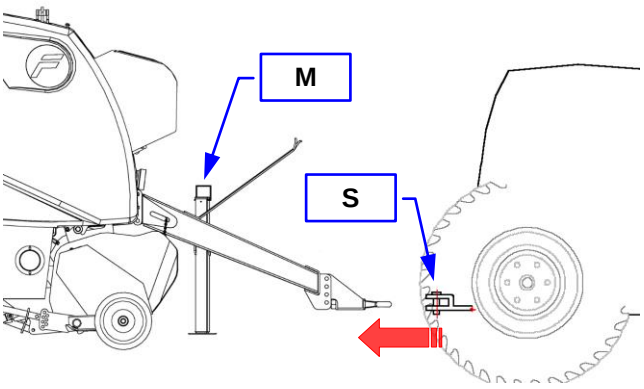
Disconnecting from the tractor

- Remove the locking pin S and rotate the foot stand all the way down..
- Then lock the foot stand P by plugging in the S position as shown in the image.



Before disconnecting the baler from the tractor:

- Move crank "M" to lower the servo steering head to the ground.
- Remove cotter "S" from the towing eye and move the tractor away from the machine.



9. TRANSPORT

Towing the baler on public roads

WARNING!

When towing this machine on public roads, it is advisable to use signalling lights and turn signals.

- **Never use the machine as a means of transport for goods and/or people.**
- **It is strictly forbidden to drive the baler with bales on board.**
- **Do not operate the baler during towing.**

CAUTION!

Use caution when moving the towed baler. Reduce speed if the weight of the baler exceeds the weight of the tractor. The baler must be empty during road transport.

During road transportation, the round baler must be empty, all components in transportation mode and all safety devices inserted.

IMPORTANT!

Avoid tight turns when towing the baler. Considerable damage can be caused if the steering head should hit into tractor tyres.

IMPORTANT!

The maximum driving speed is determined by local road rules and by tyre size. Consult the "Tyre" paragraph in the "Technical Data" chapter to determine the maximum permitted speed for each tyre and for the baler.

10. BALER USE

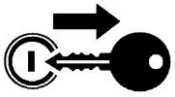
IMPORTANT!

All operations should be performed by a single operator who must have read and understood all parts of this manual, particularly the chapters regarding safety.

Before starting work, verify that the machine is all in order, that lubricating oils are at the right level and that all parts subject to wear and tear are fully efficient..

CAUTION!

Unless otherwise specified in this operator's manual, adjustment and preparation for work must only be carried out with:



- **The tractor switched off and keys removed from the dashboard.**
- **The machine switched off and blocked stably on the ground.**

After making the connections described in the chapter ”Connection and disconnection”:

- Switch on the tractor without engaging PTO and verify proper functioning of the various baler movements.
- Verify functioning of the hydraulic system: the opening and closing of the hatch, raising and lowering of the pick-up (remember to bring the stop valve lever to the "OPEN" position to raise the pick-up).
- Verify functioning of electrical connections to the terminal: switch on the "ICON" control system.
- Verify functioning of the electrical system, turn signal, parking and brake lights.
- Engage PTO.

IMPORTANT!

Before you perform these verifications, make sure that no one is in the vicinity. Operate for the first time with caution, verifying correct operation of all mechanical and transmission components.

Running in

Consider the first fifty bales as a break-in period (that is, until the paint of the bale chamber becomes smooth).

Before use, heavily lubricate the telescopic components of the connection to the PTO.

IMPORTANT!

If slippage occurs during operation, disengage PTO and re-start it at low speed until the joint engages, then continue working with the PTO at rated speed.

Preparing the product

Swath size

Well-formed, uniform bales are obtained by feeding swatch widths that are the same size as the collector, or else half or less of the width of the collector.

Avoid swaths of medium width. When the operator moves to the side on a swath of this size to direct the product at the ends of the collector, the product is continuously fed towards the centre. As a result, more material will be fed toward the centre of the bale than toward the end. The result of this is barrel-shaped bales with a low density at the ends and a high density at the centre.

Preparing hay for baling

The product to be baled can be prepared in different ways, depending on preference and the equipment available. The best bales are formed with product that is cut, conditioned and raked in appropriate sized swaths. This allows the operator to follow the swath and direct the material into the press in an appropriate manner to produce compact and uniform bales.

The bale forming technique allows a product moisture content up to 18%.

If humidity is too high, the product will deteriorate.

If humidity is too low, an excessive crushing and loss of leaves will occur.

Cut the product as long as possible. In many products, greater length facilitates baling and makes the bales more smooth and weatherproof.

Do not excessively condition the product, especially legumes such as alfalfa and clover.

Excessive conditioning causes leaves to dry too fast and detachment where they were damaged (losses). If bales must be stored outside, excessive crushing of their stems will promote the absorption of moisture. Insufficient conditioning can also cause deterioration, especially when dealing with products from trees or other robust stems.

NOTE: Products that are too dry and slippery, sometimes encountered in corn stalks, some herbs and a variety of wheat straw, can be baled in a satisfactory manner if the product is long enough to hold the bale together.

Preparing silage for pressing

The product can be cut and prepared with the usual equipment such as a rotary mower or lawn mower and a tedder rake.

Produce uniform swaths. Flat, complete swaths are preferable. The best store results are obtained when the pressed product contains 40-50% dried product.

Preparing straw for baling

If possible, make sure that straw is not chopped excessively by combine harvester threshing at the time of wheat harvest. If straw is already very dry and short, do not

remove the first baling swath. A full, correct size swath produced by a large combine harvester gives better results than a small one.

Adjusting pick-up wheels

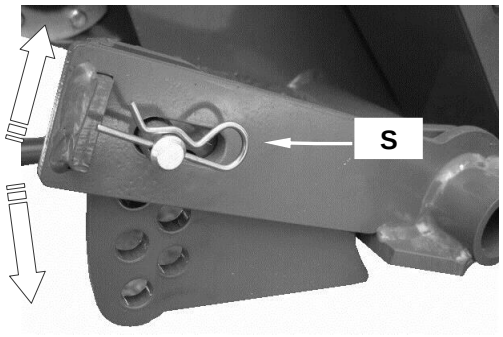
IMPORTANT!

The pick-up collector teeth must never touch the ground. Therefore, adjust the working height of the pick-up in such a way that collector teeth remain raised a minimum of 2-3cm from the ground.

The working position of the pick-up should be adjusted by means of the side supporting wheels in one of the foreseen positions and the same on both sides.

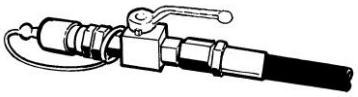
Adjusting pick-up working height:

Raise or lower the pick-up working height by changing the position of the cotters "S" on the wheel arm, inserting them into one of the holes located on the support structure, according to your working needs.



To lower or raise the pick-up, use the tractor selector lever, opening the stop valve located near the quick coupling (position: “OPEN”)

OPEN



Conveyor

The function of the conveyor belt is to convey and direct material to be baled in order to ensure a constant flow.
The height of the conveyor can be varied, according to the type and amount of material, by moving the two buffers (one per side) into their holes.

With short products and/or small swaths, adjust the conveyor closer to the teeth of the pick-up, and with tall products and/or massive swaths, the conveyor must be adjusted to a position further away from the teeth of the pick-up.

Adjusting the conveyor

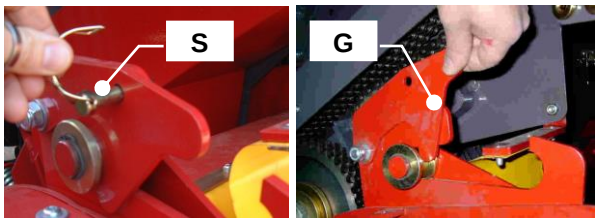
CAUTION!

Always adjust the height of the conveyor with:

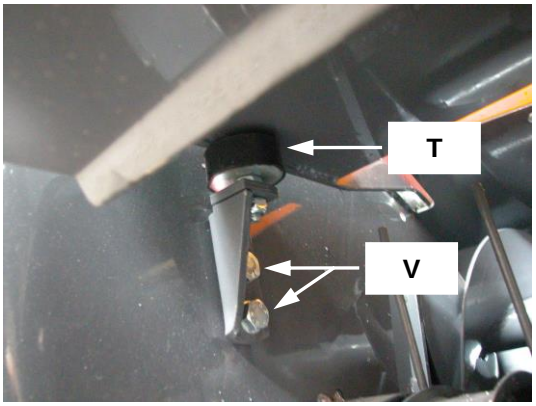
- **Tractor engine off, extracted keys on the dashboard and all moving parts of the machine at a complete stop.**
- **Machine is switched off and secured firmly to the ground (parking brake or wedges).**

The conveyor must be disassembled in order to adjust the position of the two buffers (one per side) it is necessary to disassemble the conveyor:

- Unhook and remove the two "S" safety pins (one per side) and lift the "G" locking latch (one per side).
- Remove the conveyor.



- Unscrew the "V" screws that fix the buffer "T",
- Then position the buffer in one of the appropriate holes on the side of the pick-up based on working needs;
- Tighten the "V" screws again.



IMPORTANT!

Position the two "T" buffers (one per side) in the same position on the right and left side of the pick-up.

- Remount the conveyor and secure it again with the two "G" hooks (one per side) and the two "S" safety pins (one per side).

Cutting system (only for CUT model)

The Round baler is equipped with a cutting device to cut the product while gathering swath.
The knives can be inserted into the chamber in order to cut by using the ICON control system terminal.

More information relative to the engagement or disengagement of the knives can be found under "*ICON Control System / Main functions / Cut status*".

The cut length is 77mm.
To cut a longer product some knives must be removed.

More information on adjusting, replacing or maintaining the knives can be found under "*Maintenance and regulations*"

Choosing the working pressure

The choice of the work pressure depends on the bale density desired, and it can be increased for dry products or decreased for humid products.

The bale density measurer indicates the pressure exerted on the hatch screw jacks

When the hatch is closed and the chamber empty the pressure is set at chamber pre-load.

The pressure increases at the end of the bale forming process because, as the chamber is gradually filled with the product, the oil in the circuit pushes the hatch screw jacks to expand outwards.

IMPORTANT!

The pressure must never exceed 130 bar.
Exceeding maximum pressing pressure damages the machine! In this case, contact your dealership.

More information relative to the work pressure settings can be found under "*ICON Control System / Main functions / Pressure*.

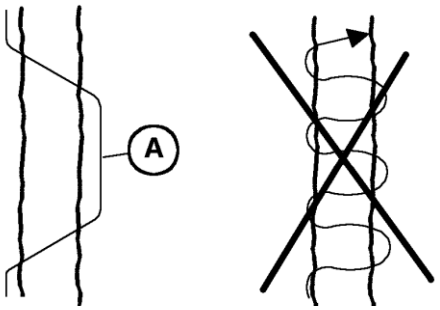
Product feeding

Swath width equal to collector width

This is an ideal width swath.

The swath must be uniform, with little or no ridge. Excessive ridge leads to the production of barrel-shaped bales.

Swaths that have a width equal to that of the collector are the best as they do not require a serpentine or crossed passage.



A = period of advancement in line

Tight swath

Feed product on one side of the collector for 6÷8 seconds. Then, steer over the swath and feed the product on the opposite side for the same interval. Reduce the period of advancement in line (A) for heavy swaths and increase for light swaths.

Bales formed in this way will be more uniform than those formed with a continuous serpentine movement of the tractor, as shown. Continuous shifting causes an excessive accumulation of material at the centre of the bale.

Medium sized swaths

If possible, avoid medium sized swaths.

When the operator drives in a zigzag over a swath of this type to direct the product at the ends of the collector, the product is continuously fed towards the centre. As a result, the material may be more concentrated at the centre of the bale than at the ends. The result is the formation of barrel-shaped bales.

Short, dry, smooth product bales

In case of obstruction, attempt one of the following:

- Lift the collector to maximum.
- Reduce tractor PTO regime.
- Reduce the density of bales when necessary.
- Make wider swaths (add as needed).
- Replace broken collector teeth.

Use of the baler on corn stalks

To prolong the life of collector teeth, cut stalks before pressing.

To increase feeding opening, lower the collector (teeth must not touch the ground).

Increased productivity can be obtained by baling smaller swaths at a faster advancement speed.

Make sure that rated PTO regime is maintained.

Use of the baler with silage and wet products

Always start the bale with the collector centred on the swath.

Before entering onto a swath, reduce engine speed of the tractor to a minimum low. Choose a gear which allows for advancement speed of 6 to 10 km/h with the PTO at rated regime.

To ensure regular feeding, make sure that the towing bar does not touch the swath.

Automatic unclogging of the product

The automatic baler has a device to avoid clogging of the product during the product feeding phase.

If an excessive amount of product clogs the feeding channel, the PTO shaft overload clutch will automatically disengage and make a clearly audible noise.

In this case, the tractor PTO must be immediately disengaged and the floor lowered by using the ICON control system terminal and the tractor selector lever.

Restart the tractor PTO again at a low speed and slowly increase up to 540g/m (without ever exceeding 610g/m). In this way, the accumulation of product may be easily conveyed into the bale forming chamber.

After having solved the obstruction of the feed channel, the floor must be returned to start position by using the ICON control system terminal and the tractor selector lever.

Remember that, if they are not being used, the knives must be returned to rest position after closing the floor.

More information relative to the moving of the floor and engagement or disengagement of the knives can be found under "*ICON / Main functions / Tape"* and "*ICON / Main functions / Cut status".*

Re-engage the tractor PTO and continue working.

WARNING! DO NOT RISK.

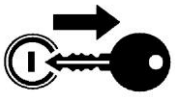
- **Never use any kind of tool or key on the shaft while the tractor engine is running.**
- **Never approach the rotating parts of the pick-up and maintain a safe distance when the tractor is on.**
- **Never attempt to remove forage from the machine while it is moving.**

Manual unclogging of the product

If the clogging of the feed channel is not solved with the procedure described above, proceed by manually unclogging the product.

WARNING!

Before any manual declogging operations:



- **Disengage the PTO.**
- **Stop the tractor, remove the keys from the dashboard and wait for all moving parts of the machine to come to a complete stop.**
- **Make sure that the machine is resting firmly on the ground and that it is blocked from any sudden movements (parking brake or wedges).**

CAUTION!

Be careful when performing these operations, the rotor area is very dangerous, due to the presence of cutting knives.

Wear gloves and protective clothing, and with the help of suitable tools free the area blocked by the product.

Only after completing the steps described above, re-engage the tractor PTO and continue working.

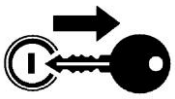
Net binder adjustment

The ICON control system allows you to view and check the number of revolutions when the bale is beign wrapped.

Further information on net binder settings can be found in the "*ICON control system"* chapter.

WARNING!

Before carrying out any adjustments and/or maintenance on the net binder:



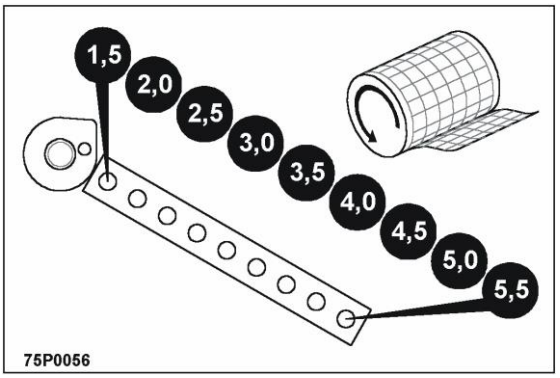
- **Disengage the PTO.**
- **Stop the tractor, remove the keys from the dashboard and wait for all moving parts of the machine to come to a complete stop.**
- **Make sure that the machine is resting firmly on the ground and that it is blocked from any sudden movements (parking brake or wedges).**

CAUTION!

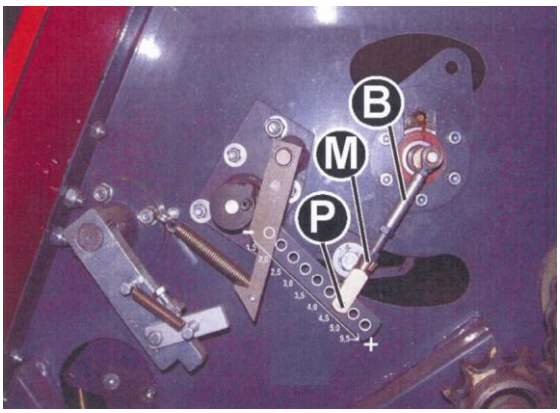
Be very careful when working near the net binder arm and the blades of the binder.

Adjusting net turns

- To adjust the number of turns of net around the bale, open the left side guard and select the hole according to the number of turns desired.

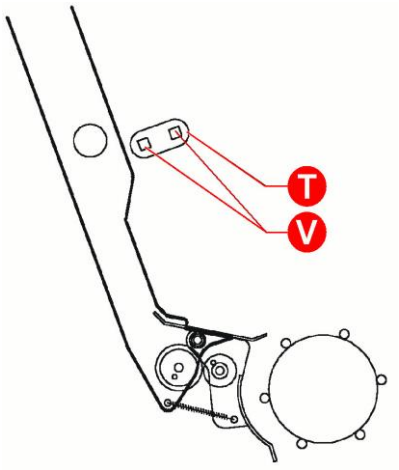


- Open the left side cover.
- Release the spring **"M"** to remove the pin **"P"**.
- Move the arm **"B"** so that the pin **"P"** can be inserted in the hole corresponding to the number of turns of net desired to wrap the bale.
- Lock the spring **"M"** again.



Adjusting net feed arm

- Adjust the stroke of the net feed arm against the intermediate roller by moving the block "T", located on the right side of the machine.
- Open the right side cover.
- Loosen the two screws "V" and adjust the block "T" by moving it forwards or backwards.



NOTA: If you move the block too close to the roller, the arm could move forward far enough to collide with the roller during wrapping. If, on the other hand, the block is too far from the roller the movement of the arm could be insufficient and the net will not be taken and the bale not wrapped.

- When the adjustment has been made, screw back the 2 screws **"V"** and replace the cover.

Forming a bale

WARNING!

DO NOT RISK. To avoid being dragged into the machine, resulting in serious injury or death:

Do not attempt to hand feed product or twine into the baler or to unclog the feeding area while the baler is in movement. The machine feeds product faster than it can discharge it.

Before starting to work, turn on the ICON control system.

Before starting work, verify that the binder arm is in the resting position and that the respective cutting devices are unloaded.

Position yourself on the swath, open the pick-up stop valve ("OPEN" position) and lower it.

IMPORTANT!

Make sure the hatch is closed as indicated on the ICON control system monitor (operation screen)

Set the pressure value and the net binding revolutions based on your working requirements.

IMPORTANT!

NEVER EXCEED a pressure of 130bar. Exceeding maximum pressing pressure damages the machine!

Engage the PTO, operate the tractor at rated PTO regime and then start to feed the round baler as described in the "Product feeding" section".

Binding and unloading bales

Once the bale diameter has been reached, an acoustic signal warns you that you must immediately stop the movement of the tractor so that the binding machine can start tying the bale.

The ICON control system can automatically or manually start and carry out the binding cycle at the end of each bale.

At the end of each binding cycle, the net is cut and the ICON control system will prompt you to open the hatch to unload the bale on the ground.

WARNING!

Before opening the hatch and unloading the bale:

- **Make sure you are on a flat terrain or in a suitable position in the case of sloping terrain, and not in the vicinity of people.**
- **Move away any people from near the machine, in particular from behind the hatch.**

Then, operate the hydraulic selector lever, on the tractor, to open the hatch.
Wait for the bale to exit and close the hatch.

At this point the ICON control system will inform you that your machine is ready to complete a new work cycle.

If the hatch does not close as normal, the ICON control system will warn you of the problem.

IMPORTANT!

Never start gathering with the hatch opened or with only one hook opened.

It is also possible to manage the counting of the bales by using the ICON control system.

All detailed information on the various phases of the bale formation, binding and unloading phases can be found in the "*ICON control system "* chapter.

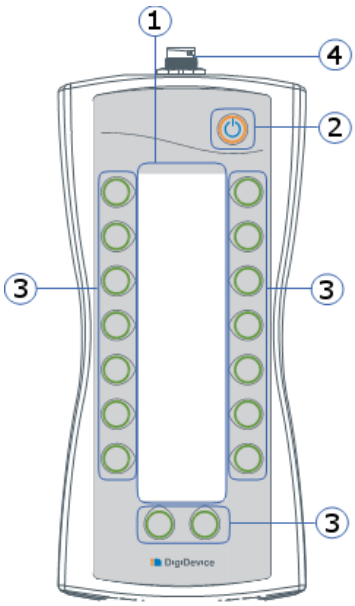
11. ICON CONTROL SYSTEM

General warnings

- Read carefully this manual before using the weight indicator
- • Be sure that the electrical power supply is as per system requirements (12 V DC)
- • Do not push on the display as this may cause some afterimages
- • Do not rub or strike the display with anything hard as this may scratch, mar, or damage it perma- nently
- • Do not use scratching tools to push buttons
- • Do not use chemical dissolvent to clean the indicator
- • Do not apply any water jet, high or low pressure, on the system or on its parts
- • Use only accessories approved by the manufacturer
- • Only qualified personnel can do maintenance on the system
- • Do not try to open or misuse the system
- • Use the system only for the purpose and following the specifications in this user manual
- • Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material
- • Do not dispose of this product with general household waste
- • Disposal of this product must be carried out in accordance to the regulations of your local authority

System description

1) DISPLAY
2) ON/OFF KEY
3) OPERATING KEYS
4) CONNECTOR



Main functions

Before starting
Check that the power supply - communication cable is connected to the Indicator.

Switching on and off

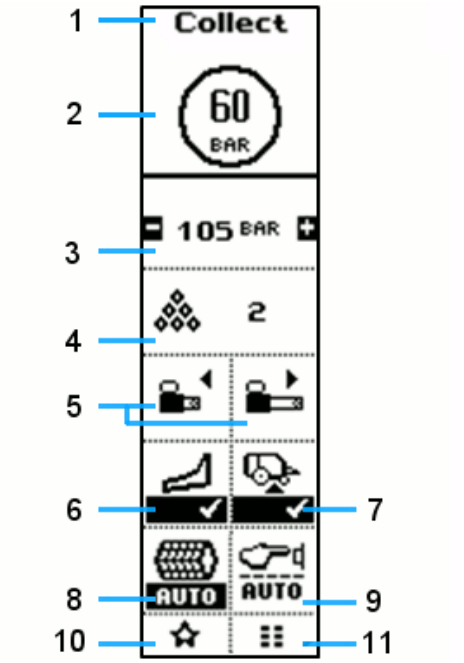
- **To switch on the system** press shortly the On / Off Key . The Indicator display will light on, while the initializing messages and the presentation are displayed
- **To switch off the system** press the ON / OFF key for about 3 seconds.

Side keys use
Side keys work as described by the icons on the display near to each one of them.
Keys allow, based on the screen, to display other screens, execute commands, insert parameters values, etc...

Function description – Working Screen

The working screen contains visualizations and commands which allow the operator to perform product collection, bale tying and eject.

1) **OPERATING PHASE**
2) **INFORMATION**
3) **PRESSURE**
4) **COUNTERS**
5) **NET MOVEMENT**
6) **CUT STATUS**
7) **TAPE**
8) **START TYING**
9) **NET TYING MODE**
10) **SENSOR ENABLE**
11) **MENU**



1) OPERATING PHASE
In this area are displayed the working cycle phase and the indications for the operation for cycle execution:

- Collect;
- Stop;
- Tying;
- (Tying error);
- Cut;
- Open;
- Eject;
- Close
- (Tape opened).

Some sound signals attract the attention of the operator during phase crossings which require his action or, in any case, during the more delicate operations (i.e. tying)
.

2) INFORMATION

In this area, even with graphic elements, some descriptions about the working cycle phases are displayed, together with indications for the operation for cycle execution.

.

Visualizations during collecting phase:

- FORMING BALE PRESSURE (87 BAR in example above).

NOTE: Once reached 90% of the tying pressure value set in the program, an intermittent sound signal starts.

Once reached the tying pressure value set, both a sound and a visual indication start, to show to the operator that he must to stop the vehicle (and start tying).

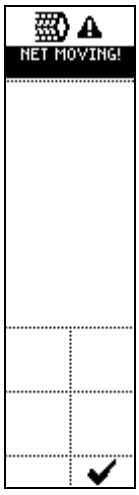
In case of manual cycle, with tying that shall be started by the operator, the “STOP” display remains on the area.

In case of automatic cycle, after displaying the message which asks to the operator to stop the vehicle, the tying phase starts.

NOTE: if the door will be accidentally opened during collecting phase, both a sound and a visual indication start, to show to the operator that he must close it

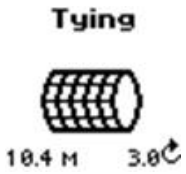
NOTE: if the tape will be accidentally opened during collecting phase, both a sound and a visual indication start, to show to the operator that he must close it

During collecting phase, when the net starts moving, this alert screen is shown:



Visualizations during tying phase:

- METERS OF USED NET.
- NUMBER OF NET TURNS BEING DONE.



During this phase, the operator can also decide to stop the tying cycle, by pressing the key near to the icon ■.

This will lead to a message of cycle interruption due to a tying error, with a few available choices to proceed with the cycle:

- Do a further tying phase, by pressing the key near to the icon (or when in manual cycle);
- Restart the tying cycle, by pressing the key near to the icon .

The same warning is displayed if, during the tying phase, the net roll ends or if it's not well hooked.

Visualizations during cut phase:

Once the tying phase is complete, the net is cut.

Visualizations during open request phase (Open):

- MACHINE STATUS (CLOSED GATE).
- THE OPERATOR IS REQUIRED TO OPEN THE GATE, USING THE HYDRAULIC COMMAND LEVER ONBOARD THE TRACTOR.

During this phase, the operator can also decide to press the key near to the icon , avoiding the gate sensor signal, which indicates that the gate is closed, and go to the next phase or even repeat the tying phase, by pressing the key near to the icon (or when in manual cycle)

Visualizations during ejecting phase:

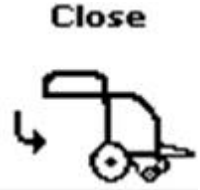
- MACHINE STATUS (OPEN GATE WITH BALE INSIDE THE MACHINE);

During this phase, the operator can also decide to press the key near to the icon and go to the next phase.

This can be also done in the case that the ejector sensor should not properly detect bale ejection, allowing the cycle to go on.

Visualization during close request phase (Close):

- MACHINE STATUS (OPENED GATE);
- • THE OPERATOR IS REQUIRED TO CLOSE THE GATE, USING THE HYDRAULIC COMMAND LEVER ONBOARD THE TRACTOR;



During this phase, the operator can also decide to press the key near to the icon , avoiding the gate sensor signal, which indicates that the gate is open, ending the cycle

When starting the next collecting phase, the display will show a message informing that the gate is open

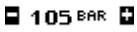
In the *Sensors enable screen* menu a parameter allow the user to avoid the gate sensor signal (it is recommended to activate that option only for diagnostics or to end a job in case of damaged device

Before starting to form a bale, if the tape is opened, this screen will be displayed:

During the tying phase, if the tape is opened, this screen will be displayed:

3) PRESSURE

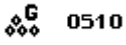
Set pressure value to tie the bale. This causes tying start (in automatic mode) or tying warning acoustic alarm (in manual mode);
Press the side keys near to the icons ⊞ and ⊟, to set the tying pressure value (max 130 bars);



4) COUNTER

- Partial counter: you can reset the counter keeping pressed one of the two side buttons for 3 seconds.
- Press the keys near to the counter to see and manage the global counter.

- Global counter: you can reset the counter keeping pressed one of the two side buttons for 10 seconds.
- Press the keys near to the counter to see and manage the partial counter



5) NET MOVEMENT

Buttons for the actuator manual management:

- : tying unit enters inside the chamber: press the side button to move the tying unit to reach the cutting position (spindle actuator retracted);
- : allows the movement of the net binder inside the chamber (spindle actuator extended);

The icon is displayed with or without a dark frame. The dark frame means that the actuator is moving.

As long as the button is kept pressed, the tying unit moves.

6) CUT STATUS

CUT solenoid valve icon. There are three different views for this icon:

- : Cut group not inserted;
- : Cut group inserted;
- : Cut hydraulic circuit activated: with the tractor hydraulic lever moves the cut group inside and outside (the icon may or may not have the check mark that indicates the cut state). When the cut hydraulic circuit is selected, the door circuit is disabled.

7) TAPE

Tape solenoid valve icon. There are three different views for this icon:

- : opened tape;
- : closed tape;
- : Tape hydraulic circuit activated: open and close the tape with the tractor hydraulic lever;
- ( ):.the icon near the button is displayed with a question mark: it means that sensor to check the tape close has been excluded, so the tape closed position is not detected by it.
  Refer to the *Sensors enable screen* menu for further details.

8) START TYING

Net tying management icon. The icon has two different views:

- : Start manual tying;
- : Start automatic tying when the pressure is reached;

In manual mode, when the tying pressure has been reached, the two icons and toggle, to indicate to the operator to press the side key near the icon.

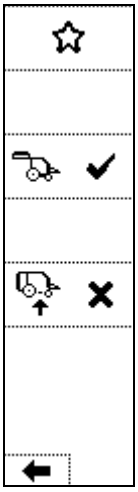
On interface start, the tying mode is manual. This avoids safety problems at startup.

9) NET TYING MODE

- : manual/automatic tying mode selection. Selected mode is displayed on the NET TYING START icon.

10) SENSOR ENABLE

Press the key below the icon ☆ to access the following sensors menu:



VISUALIZATIONS (SENSORS ENABLE SCREEN)

- DOOR CLOSED SENSOR ENABLE/DISABLE: checkmark (✔) means that the sensor on the door hook, to check the door close status, is enabled. The cross mark (✘) means that reading of such sensor is disabled;
- TAPE CLOSED SENSOR ENABLE/DISABLE: checkmark (✔) means that the sensor checking the tape close status is enabled. The cross mark (✘) means that reading of such sensor is disabled.

COMMANDS (SENSORS ENABLE SCREEN)

- Press the side keys near to the icons ✔ or ✘ , to select whether to activate or not reading from a sensor.
- Press the key below the icon ⬅ to go back to the working screen.

10) MENU

The icon leads to a screen where a password is requested. This area is reserved for the manufacturer and **FERABOLI** dealer.

12. ATTACHMENTS

A series of accessories and kits, to be applied to the machine upon request, can be used to improve binder performance and operations.
Consult your Dealer or our Spare Parts Service department to verify which accessories and/or kits are most suitable for the baler model you have purchased.

Accessories

Includes all optional devices which, if requested upon purchase of the baler, are assembled on the machine by the Manufacturer:

- Automatic chain oiling.

Kits

Includes all those optional devices that can be purchased and assembled later by the operator. Said kits come with the necessary instructions for assembling and disassembling them from the machine any time necessary, based on your working needs:

- Bale chute. (facilitates moving bales away from the hatch closing range once ejected; not recommended on sloping ground).
- Cardan shafts.
- Tyres.
- Narrowing tension discs (used to help the bales exit)

13. LUBRICATION

Safety lubrication and maintenance of the machine

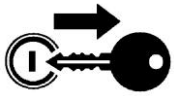
IMPORTANT!

A periodic and careful maintenance extends your machine's life and ensure your safety.

WARNING!

Before performing any maintenance operations on the machine, take heed of all basic safety regulations, as contained in chapter "2_General safety standards".

To avoid injury from unexpected movement, perform maintenance on machines supported firmly on flat, horizontal ground.



- **Do not lubricate or perform maintenance while the machine is in movement. Carry out all maintenance operations with the machine switched off and after all moving parts have come to a complete stop.**
- **If the machine is connected to the tractor, engage the tractor parking brake, stop the engine and remove the key. Always switch off the ICON control system.**
- **If the machine is disconnected from the tractor, block the wheels to prevent movement.**
- **Never lift the machine from the ground.**

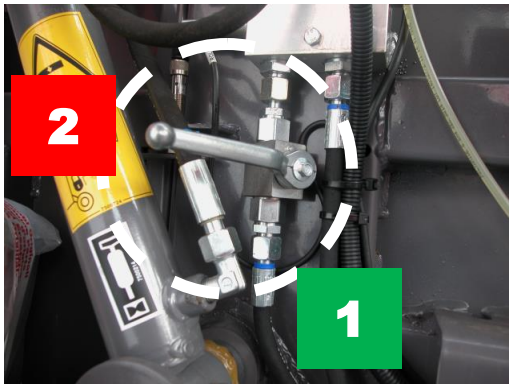
Hatch safety device

WARNING!

If you should need to perform maintenance with the machine hatch open or inside the bale forming chamber, block the tailgate using the safety tap in position "2" (tailgate locked).

Always comply with safety regulations when the hatch is open.

Close the tailgate when you move away from the machine.



IMPORTANT!

Remember to bring the tap back in position "1" (tailgate free) before closing the tailgate, to prevent serious injuries to the machine structure.

Compliance with maintenance intervals

IMPORTANT!

Recommended maintenance intervals refer to normal operating conditions. Perform maintenance MORE FREQUENTLY if the baler operates in adverse conditions.

Performing lubrication and maintenance

Clean grease fittings before using the grease gun. Immediately replace any broken or missing fittings. If a new fitting is not able to receive grease, remove and check connected parts.

Grease

Preferably, use AGIP GR MU EP0 grease

IMPORTANT!

Some types of grease thickeners are not compatible with others. Before mixing other types of greases, consult with your supplier.

Oil

Use a high-viscosity oil suitable for the temperatures expected between one oil change and another.

In the gear box, use oil: AGIP BLASIA EP 150

In the automatic chain oiling system tank, use oil: AGIP OSO 100

Alternative and synthetic lubricants

Conditions in certain geographical areas may require lubricants other than those specified in this manual.

Some types of coolants or lubricants may not be available in your area.

For advice or information, please consult your **FERABOLI** dealer.

Synthetic lubricants can be used as long as they meet performance requirements.

Re-refined products can be used if the lubricant meets performance requirements.

Lubrication storage

IMPORTANT!

Observe laws in your country concerning the use and disposal of oil and/or lubricants.

Your equipment can operate at top efficiency only if clean lubricants are used.

Use clean containers when transferring lubricants. Store lubricants and their containers if possible in an area free from dust, humidity and other contaminants. Store containers on their side to avoid accumulating water and dirt on caps.

Ensure that all containers are properly labelled to identify their contents.

Properly dispose of all old containers and any residual lubricant.

Lubrication mixing

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance.

The mixing of oils can interfere with the behaviour of these additives and degrade the characteristics of the lubricant.

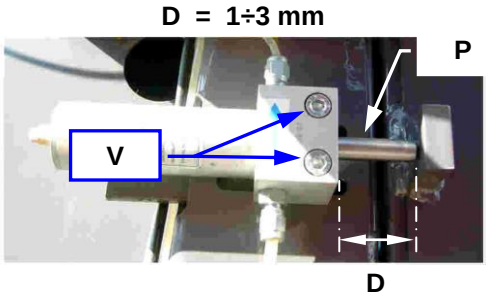
For advice or information, please consult your **FERABOLI** dealer.

Automatic chain oiling regulation

The baler is equipped with an automatic oiling system for chains.
This system works every time the tailgate closes by means of the movement of a small pump.

The flow of oil can be regulated by adjusting the travel of the piston **"*P*"** located on the small pump.

If the flow of oil coming out is too low or too high, adjust the distance **"*D*"** so as to increase or decrease the travel of the piston of the small pump:



- Open the left side cover.
- Loosen the two hexagonal bolts **"V"** and slide the pump along the slots in order to increase or decrease the distance ***"D".***:
  - **THE SMALLER** the distance ***"D"*** the greater is the flow of oil pumped and put into circulation by the automatic lubrication system of the chains
  - **THE GREATER** the distance ***"D"*** the smaller is the flow of oil pumped and put into circulation by the automatic lubrication system of the chains.

    The minimum stroke allowed is 10 mm.
- Tighten the two socket head screws
- After making the adjustment, close the left lateral cover.

Tank

The quantity of oil must be maintained between the minimum and maximum level of the tank.
Use only oil recommended by the manufacturer or your local dealer.

To refill the tank with oil:

- Open the left side cover panel.
- Clean the cover from any dirt or processing residues to avoid them from entering the tank.
- Unscrew the cap and add the oil in the tank up to the maximum level.
- Tighten the tank cap.

Close the left side cover panel.

Filter (annually)

For an efficient operation and proper lubrication of the machine, periodically verify and check the state of the filter.
Replace it each season and/or when there is a reduction in oil consumption.

- Open the left lateral cover.
- Loosen the clamps ***"F"*** and replace the filter with a new one of the same type.
- Tighten the 2 clamps ***"F"***.
- After replacing the filter, shut the left lateral guard.

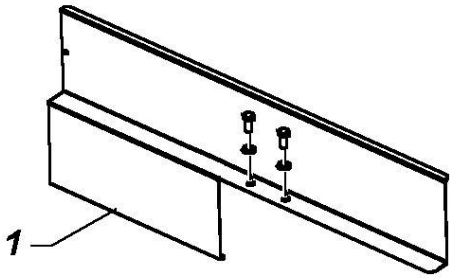
Oliatura manuale delle catene

All the chains that are not oiled by the automatic oiling system must be lubricated manually using a mixture of oil and grease.
Regularly check and lubricate these chains with special care for the transmission chains of the pick-up.

Transmission box

You need to remove the protection's carter of the transmission box “1” to reach the box itself and to perform operations like oil level check, discharge and refill.

- Unscrew and remove the two screws set on the front side of the box and remove the carter.



At the end of regulations, mount and fix the carter in its original position.

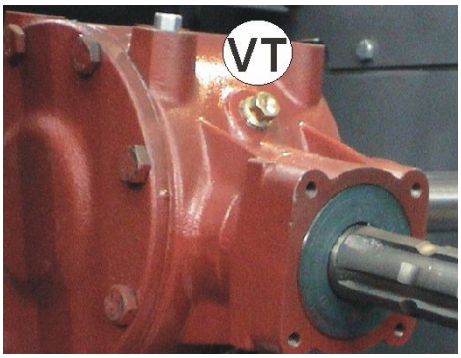
Gear box oil level (30 working days)

IMPORTANT!

Periodically check the oil level in the gear box at the beginning of each season.
Do not overfill the gearbox so not to cause overheating or loss of oil.
Use recommended oils.

Periodically verify and check the oil level in the gear box by means of the “VT” plug located on the back of the box.

If oil leaks from the box, or if it is located at the same level of the plug hole, this means that the oil level is correct..



After having checked the oil level inside the gear box, close the plug “VT”.

Draining and refilling the gear box (annually)

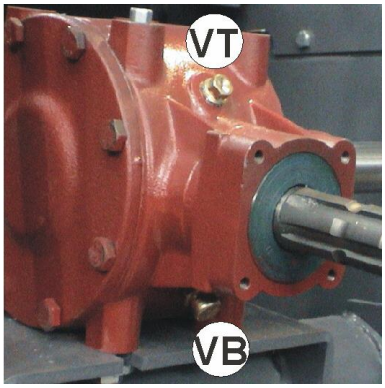
IMPORTANT!

Change gear box oil after the first 50 working hours and then at the beginning of each season.
Do not overfill the gear box so not to cause overheating or loss of oil.

Drain oil while it is still hot (for example, after machine use).

Draining and refilling the gear box (annually)

- Get a container to collect the oil that has to be dumped,
- position yourself under the machine and unscrew and remove the "VB" cap at the bottom of the box;
- drain the oil from making it to collect in the container you've prepared;
- after draining the oil from the transmission box, tighten the drain hole of the box with the "VB" cap.



Topping up oil (annually)

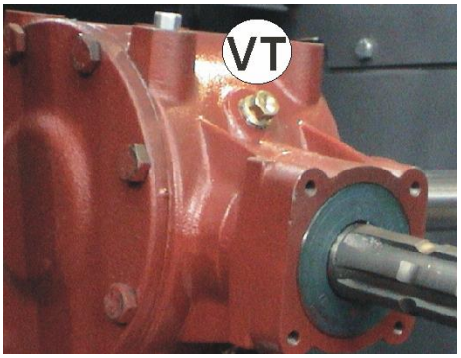
IMPORTANT!

Top up oil at the beginning of each season.

If the quantity of oil contained in the gear box is insufficient, you will have to top it up.

Quantity of oil needed for the box is 1,1 l

- Unscrew and remove the "VT" cap on the top of the box and refill oil within the box.
- After refilling, clean the "VT" cap and put close the hole.



Flexible hydraulic hoses (annually)

IMPORTANT!

Check conditions of hydraulic hoses at the beginning of each season.

If conditions are not optimum, check more frequently.

IMPORTANT!

Due to the ageing of rubber, it is advisable to replace the hydraulic hoses every 5 years.

Lubricating with grease

The round baler can have two different centralised systems to lubricate with grease:

- Automatic centralised lubrication
- Manual centralised lubrication

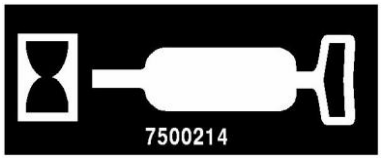
Greasing points (30 working hours)

IMPORTANT!

All operations described below must be performed at the beginning and end of each season.

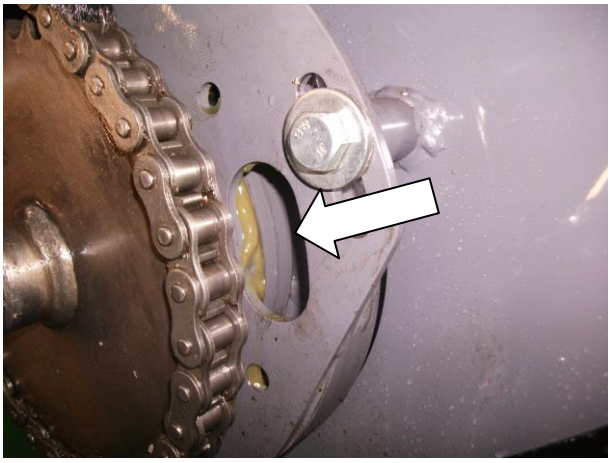
Perform lubrication operations following all safety regulations as described in the chapter "Maintenance and regulations".

Lubricate and grease all points indicated by the relative stickers: "7500214", on the machine.



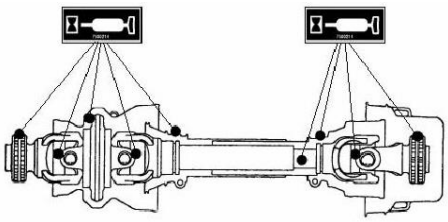
Greasing cams (10 working hours)

- Loosen the screws and remove the safety cover on the right side of the pick-up
- Insert the grease in the right hole to lubricate the pick up cam track.
- At the end of the operation, reassembly the safety guard and lock it again.



I Greasing the transmission shaft (30 working hours)

Lubricate and grease the cardan shaft according to instructions contained in the use and maintenance manual supplied with the shaft itself.



14. TROUBLESHOOTING

These tables summarise the most probable and recurring problems that you may encounter while working. **However, if the solutions suggested do not resolve the problem please contact your Dealer or our Assistance Service directly. They will be able to provide you with the technical advice necessary for resolving the problem.**

POWER FEED

PROBLEM	POSSIBLE CAUSE	SOLUTION
Tines of the pick-up throw up the forage.	Pick-up speed too high compared to the work speed.	Increase the work speed.
		Reduce the rpm of the tractor PTO.
The tines of the pick-up overtake the forage arriving.	Pick-up speed too slow compared to the work speed.	Reduce the work speed.
		Increase the rpm of the tractor PTO.
The pick-up does not collect over the entire swathe.	The swathe is too wide.	Reform the swathe by making it narrower.
The pick-up does not collect on flat swathes.	The pick-up is too high.	Lower the pick-up using the selector of the tractor.
		Adjust the position of the pick-up support wheels.
The pick-up slips and stops.	Too low pick-up: tines touch the ground	Raise the pick-up by adjusting the position of the support wheels.
	Too heavy windrow with humid tangles	Reduce the volume of the swathe by half.
	The safety bolt is broken.	Replace the safety bolt.
Insufficient gathering of the product.	Tines of the pick-up ruined or missing.	Replace the tines.
		Adjust the cam of the pick-up.

START AND FORMATION OF THE BALE

PROBLEM	POSSIBLE CAUSE	SOLUTION
Bale in the form of a barrel or truncated cone.	The forage is collected and brought only to the centre.	Feed the chamber uniformly on both sides.
	Swathe too narrow.	Reform the swathe making it wider, fuller and more square.
Excessive loss of leaves.	Shredding or fragmentation of very dry forage.	Increase the work speed and reduce the PTO speed while baling.
Insufficient bale density.	Low pressure.	Increase the working pressure.
	Irregular pick-up feed.	Feed the chamber uniformly on both sides.
	Feed speed too high.	Reduce the feed speed.
	Poor hold of the seals on the bale pressure jacks.	Replace the seals of the jacks and tighten the hydraulic fittings.
The chains jump over the teeth of the gears.	The stretchers are loose.	Stretch the chains by adjusting the stretchers.
	The gears or chains are worn.	Replace the gears or the chains.
The bale stops turning.	The torque limiter of the cardan shaft intervenes.	Reset the torque limiter of the cardan shaft (follow the instructions described in the cardan shaft manual).
	The capacity of the chamber has been exceeded.	Stop when the STOP signal appears.
The forage wraps around the rollers.	Humidity of the forage too high.	The forage must be conditioned, bale when the humidity is quite low.

CUTTER DEVICE (“CUT” MODEL)

PROBLEM	POSSIBLE CAUSE	SOLUTION
The rotor does not turn.	Rotor’s obstruction.	Clear the zone from obstructing products
	The chain transmission is broken.	Replace the chain
	The shear bolt of the safety device is broken.	Replace the shear bolt.
The product is not cut.	The knives are disengaged and not in the work position.	Engage the knives in the work position.
	The knives are not sharp.	Remove the knives and sharpen them.
The knives do not engage in the cutter.	Presence of product obstructing the gaps.	Clean the gaps before installing the knives or false knives.
	Defective electrical system.	Check the electrical system: cables, actuators and terminal.
The product is not cut.	The knives are disengaged and not in the work position.	Engage the knives in the work position.
	The knives are not sharp.	Remove the knives and sharpen them.

BINDING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The net does not start to wrap the bale.	The end of the net does not protrude enough.	Make the net dangle at least 20cm.
	The adjusting retainers of the net arm are not adjusted correctly.	Adjust the retainers so as to allow the net arm to approach the roller.
The net is not correctly cut.	The cutting edges of the blade sections are worn away.	Sharpen the blade sections.
	The net roll has insufficient braking.	Increase the braking by adjusting or shimming the lateral spring tie-rods.
The net arm does not stop to release the required metres of net.	The sensor of the net arm is badly adjusted.	Adjust the sensor.
	The sensor is broken or defective.	Replace the sensor.
The meters of net do not come down.	The net counter sensor is badly adjusted.	Adjust the sensor.
	The sensor is broken or defective.	Replace the sensor.

HYDRAULIC SYSTEM

PROBLEM	POSSIBLE CAUSE	SOLUTION
The tailgate does not close.	The valve is closed.	Open the valve.
	Some forage is left in the closing area of the tailgate.	Remove the forage.
	The return quick-release coupling of the hydraulic system has been disconnected from the tractor.	Check and correctly insert the return quick-release coupling of the hydraulic system.
The hydraulic system does not work.	The hydraulic outlets have not been activated.	Activate the auxiliary hydraulic outlets from the tractor.
	The hydraulic tubes are not connected properly to the auxiliary connections of the tractor.	Check and correctly insert the quick-release couplings in the auxiliary connections of the tractor.
	Insufficient flow of hydraulic oil.	Check and if necessary top up the hydraulic oil level in the tank on the tractor.
	Pump worn or damaged (low pressure).	Repair or replace the hydraulic pump of the tractor.
	Dirt has accumulated inside the hydraulic circuit.	Flush the system and if necessary clean the hydraulic oil filters.
	The jacks leak oil.	Replace the seals of the jacks.
	There are oil leaks in the hydraulic system.	Check the tubes and if necessary tighten the fittings.

CARDAN SHAFT

PROBLEM	POSSIBLE CAUSE	SOLUTION
Safety bolt breaks down.	Bale too heavy or too big diameter.	Reduce bale weight or diameter.
Cam safety device continuously trips.	Bale too heavy or too big diameter.	Reduce bale weight or diameter.

ICON CONTROL SYSTEM

PROBLEM	POSSIBLE CAUSE	SOLUTION
After pressing the on/off Key the display does not light up.	Feeder cable from the battery not connected to the machine cable.	Connect the male COBO plug of the machine cable to the female COBO socket of the feeder cable connected to the battery. Check that the clip of the female connector is inserted in the slot of the male connector to ensure a secure connection.
	Data transmission cable not connected to the terminal.	Insert the connector of the data transmission cable in the female socket of the terminal. Secure it by screwing.
	Inverted polarity.	Invert the cable connections on the terminal blocks of the battery: the red cable provided with a fuse should be attached to the positive "+" clip, the black cable to the negative "-" clip.
	Oxidised contacts on the tractor battery.	Carefully clean the clips. And check the condition of the battery. The voltage produced must be 12V minimum.
A message appears on the display "Battery insufficient".	Low voltage.	Check the battery or the recharging system of the tractor.
A message appears on the display "Bale binding not correct".	The net has not been taken by the bale.	Find and eliminate the cause, then restart the binding by pressing the "START-STOP" button.
	The net breaks before finishing the binding or wrapping.	
	The twine or net have run out before finishing binding/wrapping.	

15. MAINTENANCE AND REGULATIONS

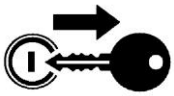
IMPORTANT!

All operations described below must be performed at the beginning and end of each season.

CAUTION!

Before performing any maintenance operations on the machine, take heed of all basic safety regulations, as contained in chapter "General safety standards".

To avoid injury from unexpected movement, perform maintenance on machines supported firmly on flat, horizontal ground.



- **Do not perform maintenance while the machine is in movement. Carry out all maintenance operations with the machine switched off and after all moving parts have come to a complete stop.**
- **If the machine is connected to the tractor, engage the tractor parking brake, stop the engine and remove the key. Always switch off the ICON control system.**
- **If the machine is disconnected from the tractor, block the wheels to prevent movement.**
- **Never lift the machine from the ground.**

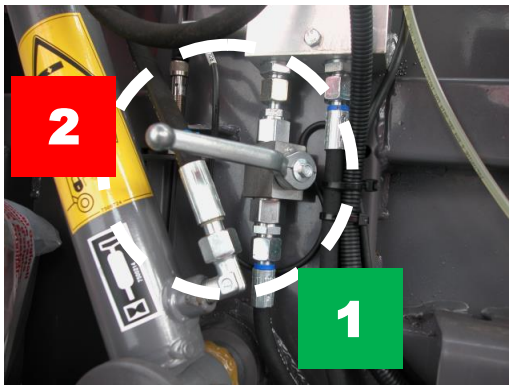
Hatch safety catch

WARNING!

If you should need to perform maintenance with the machine hatch open or inside the bale forming chamber, block the tailgate using the safety tap in position "2" (tailgate locked).

Always comply with safety regulations when the hatch is open.

Close the tailgate when you move away from the machine.



IMPORTANT!

Remember to bring the tap back in position "1" (tailgate free) before closing the tailgate, to prevent serious injuries to the machine structure.

Compliance with maintenance intervals

IMPORTANT!

Recommended maintenance intervals refer to normal operating conditions. Perform maintenance MORE FREQUENTLY if the baler operates in adverse conditions.

Original spare parts

IMPORTANT!

USE ORIGINAL SPARE PARTS ONLY.

Original FERABOLI spare parts are made taking into account the specific needs of FERABOLI equipment.

Spare parts made by other manufacturers are neither controlled nor approved by FERABOLI. The use of said components on John Deere machines may affect operations and compromise safety.

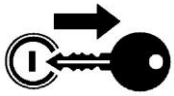
To prevent this risk, only use original FERABOLI spare parts.

Welding (annually)

WARNING!

RISK OF FIRE! Never perform welding work on your baler with a bale in the chamber.

Before performing any welding operations on your baler:



- **Stop the tractor, remove the keys from the dashboard and wait for all moving parts of the machine to come to a complete stop.**
- **Disconnect all electric and electronic functions.**
- **Switch off the control system.**

Replacing hydraulic components

WARNING!

Splashes of liquid under pressure can penetrate the skin and cause serious injury.

Relieve pressure before disconnecting hydraulic hoses or other lines. Tighten all joints before restoring pressure.

Use a piece of cardboard to identify leaks.

Protect hands and body from high pressure liquids.

Always remove hydraulic pressure before intervening on hydraulic components.

IMPORTANT!

When removing or connecting hoses, use two wrenches to avoid twisting the hydraulic tubes.

Contact a doctor immediately if you are hit by a jet of fluid. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Medical personnel not familiar with this type of injury should consult a specialist.

Tightening bolts

IMPORTANT!

All assemblies with screws must be tightened according to the values in the section "Tightening torque table" (chapter "Tables and schemes"), unless otherwise specified.

Verify bolt tightening after the first 3 hours of work or after the first 10 bales that the machine wraps.

FOR THIS MACHINE, THE VALUE "8.8" REPRESENTS THE STANDARD AND THE MINIMUM QUALITY USED.

Diameter and tightening torques for material qualities according to DIN ISO 898.

Baler steering head

Annually retighten the screws holding the drawbar chassis to **700Nm**

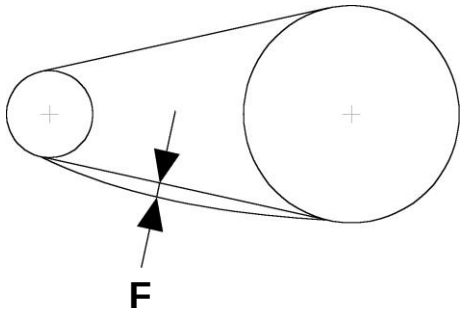
Annually retighten the screw holding the towing eye to **700Nm**

Tensioning chains (30 working days)

IMPORTANT!

Regularly check transmission chain tension and, where present, the functioning of the automatic tensioners.

The value "F" of chains tensioning must be equal to 5-10 mm.



Adjusting automatic tensioners

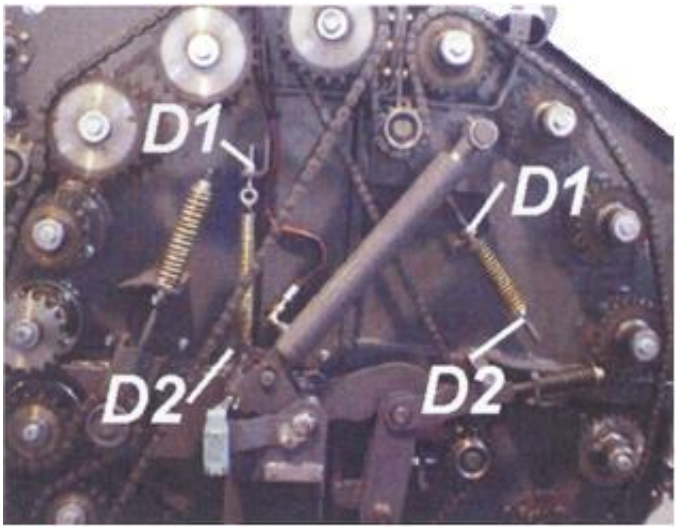
The machine roller chains are tensioned automatically by spring tensioners. Periodically check proper chain tensioning and restore when necessary.

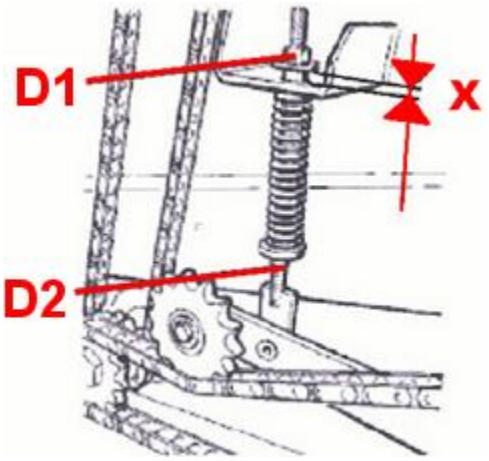
Check automatic tensioner functioning.

Automatic tensioners are placed on the left side of the machine.

In order to verify and adjust chain tension:

- Open the right side cover.
- Loosen the nut D1 and turn the nut D2 / D3 adjust the distance X, which should be about 10 to 15mm.
- After the adjustment, tighten again the nut D1.
-
- Use the nut to adjust chain tension.
- Close the right side cover.





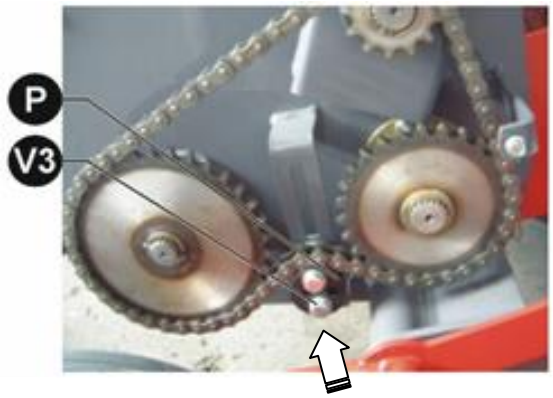
Adjusting manual tensioners

Pick-up roller chains are tensioned manually by tensioners. Periodically check proper chain tensioning and restore when necessary.

To check and adjust chain tensioning, open the covers. Close the covers once the adjustment is complete.

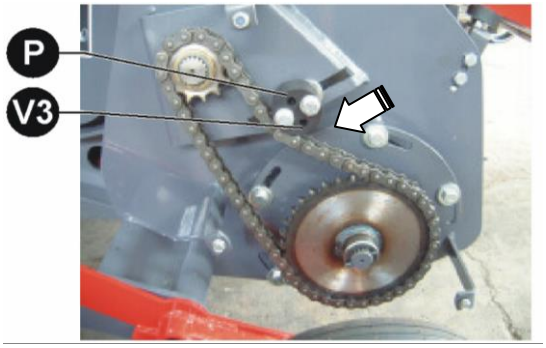
Transport roller chain tensioning (left side):

- Loosen the "V3" screws.
- With the help of a hammer, adjust chain tension, moving the tensioner P upward with small strokes.
- Once adjusted, re-tighten the "V3" screws.



Transport roller chain tensioning (right side):

- Loosen the "V3" screws
- With the help of a hammer, adjust chain tension, moving down the tensioner P with small strokes.
- Once adjusted, re-tighten the “V3” screws.

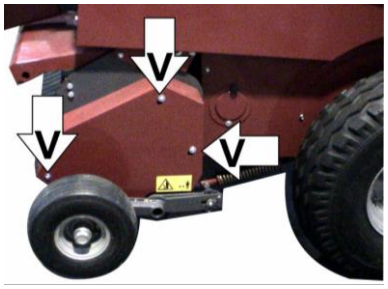


Replacing the pick-up safety screw

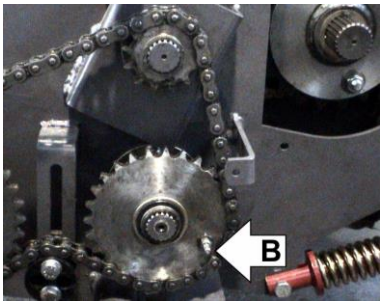
If the bolt located on the mechanical safety device of the rotor should break replace it with one of identical quality: **Bolt "B" TE M8x 40-8.8 UNI5738 – DIN 960** (not galvanised, partially threaded).

In order to replace the bolt, you need to remove the safety cover panel on the left side. Replace the covers that were removed at the end of the operation.

- Loosen the screws **"V"** and pull out the safety cover.



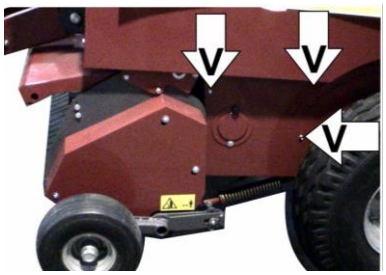
- Remove the bolt and make sure that there are no pieces of the sheared bolt caught between parts of the transmission.
- Realign the safety device holes, manually rotating the gear.
- Reinsert the new bolt ***"B"*** and tighten it.



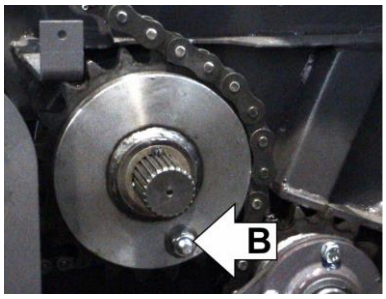
Replacement of the mechanical safety device of the cut device ("CUT" model)

If the bolt located on the mechanical safety device of the rotor should break replace it with one of identical quality: **Bolt *"B"* TE M14x60–8.8 UNI 5738 - DIN 960** (not galvanised; partially threaded).

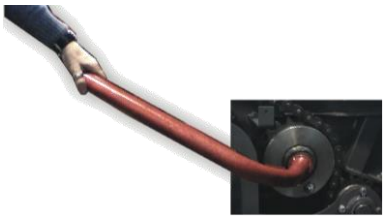
To replace the bolt, you need to remove the safety cover put on the left side of the machine:.



- Loosen the screws **"V"** and remove the safety cover.



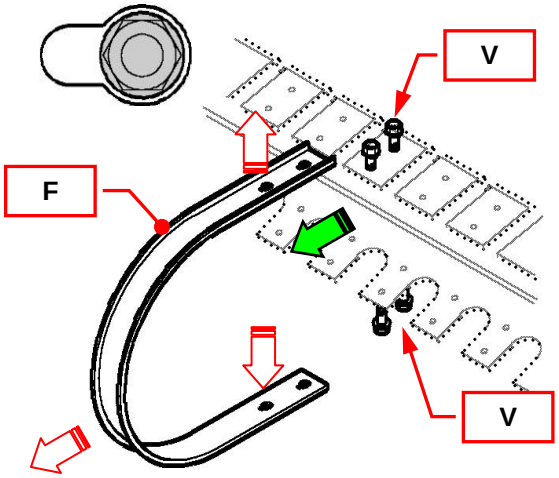
- Remove the bolt and make sure that there are no pieces of the sheared bolt caught between parts of the transmission.



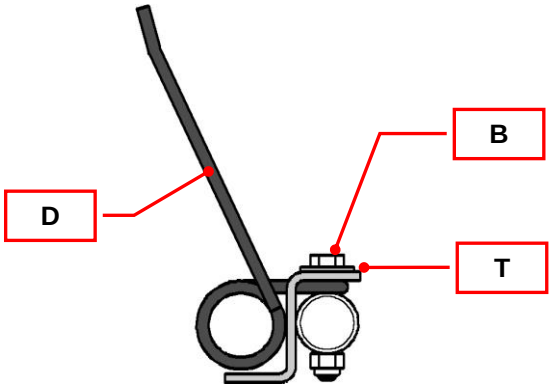
- Using the crank handle supplied realign the safety device holes; insert the new bolt ***"B"*** and tighten it.
- Remount the cover and screw back the screws **"V"**.

Replacing collecting teeth

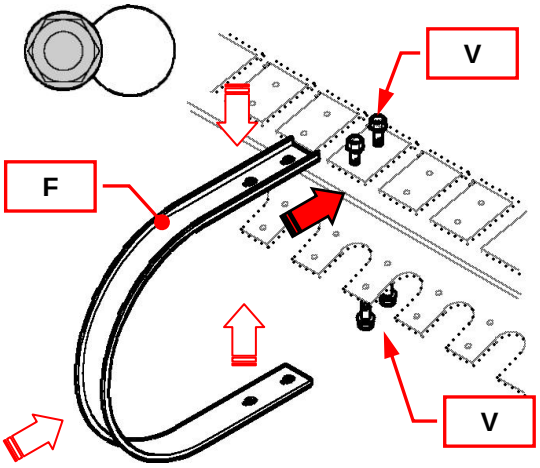
- Loosen the 4 screws "V" (2 on top and 2 below) fastening band "F" near the tooth to be replaced. Then remove the band, passing the head of the screw "V" through the slot hole on the band itself.



- Unscrew the bolt "B", remove the tooth "D" and its dowel "T".
- Replace the collector tooth "D" with a new one that is the same.
- Retighten with dowel "T" and bolt "B".



- Replace the band "F", inserting it on screws "V" and push the piece against the screw itself.
- Finally, tighten the 4 screws "V", complying with tightening value 15Nm.



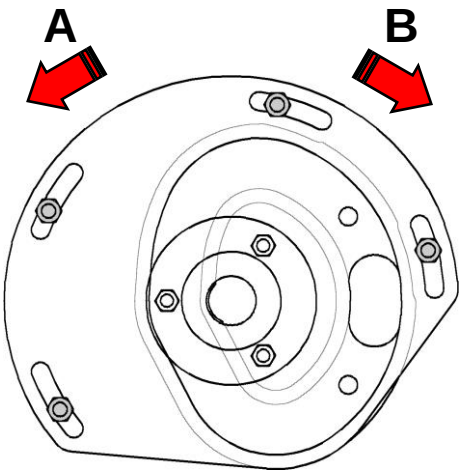
Adjusting pick-up cams

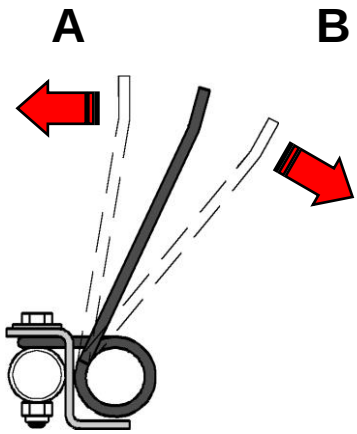
Adjust the product release position of the collector tooth by intervening on cams located on the right side of the pick-up

- Loosen screws and remove the safety cover on the right side of the pick-up.
- Loosen the four screws "V" securing the cams.

Adjust cam position, turning it so as to move the collector teeth closer to or away from the transport unit.

<u>Turning the cam toward position</u>:
A = to move tooth closer to the collector unit.
B = to move tooth away from the collector unit..





- Once adjusted, re-tighten the four screws "V".
- Replace the safety cover and re-tighten

Replacing the blade of the net binder

CAUTION!

Take great care regarding the blade sections.

If the wrapper blade sections do not cut the net (the blades are worn or broken) they must be replaced:

- Remove the rivets that originally fixed the blades.
- Replace the worn or broken blades and **secure** them again to the wrapper arm **using M6X 20 screws (instead of rivets)..**

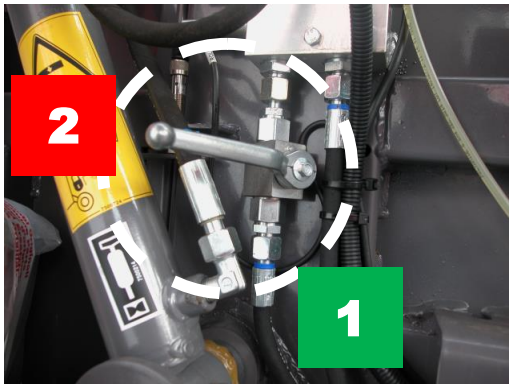
Maintenance and adjustment of the cutter device ("CUT" model)

The knives or false knives must be removed or put back whenever you do the following:

- Remove all or only some of the knives.
- Remove some of the knives for sharpening.
- Replace all or only some of the knives with false knives..

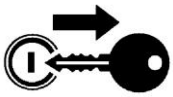
WARNING!

Before performing any removal and / or installation of knives, block the tailgate using the safety tap in position "2" (tailgate locked)).



IMPORTANT!

Remember to bring the tap back in position "1" (tailgate free) before closing the tailgate in order to avoid causing serious damage to the structure of the Round baler .



- **If the machine is connected to the tractor, engage the tractor parking brake, stop the engine and remove the key. Always switch off the ICON control system.**
- **If the machine is disconnected from the tractor, block the wheels to prevent movement.**
- **Never lift the machine from the ground.**

WARNING!

The knives are sharp and cut easily, it is advisable to use cut resistant gloves!

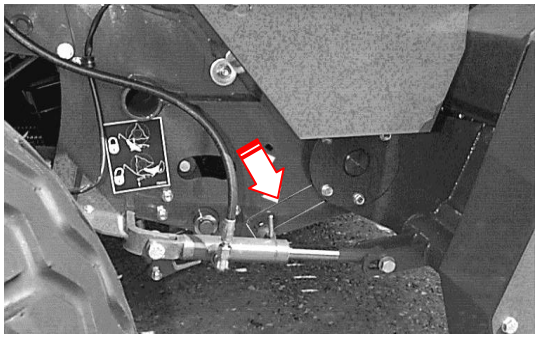
Knives removal ("CUT" model)

To remove the knives they must be **disengaged**, doing this directly from the terminal of the ICON control system.

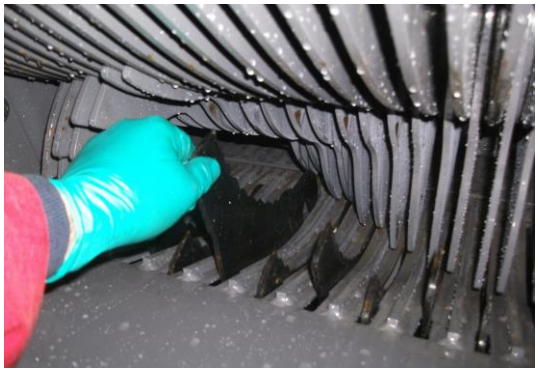
To facilitate removal of the knives, lower the floor through the ICON control system terminal and tractor selector lever.

More information relative to the engagement or disengagement of the knives can be found under "*ICON control system / Main functions / CUT status*".

- Release the knives by moving the handle located on the right side of the machine, to position **"knives off"** (lever lowered).

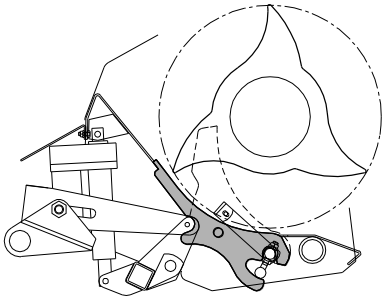


- Enter the bale formation chamber and take hold of the knives to be removed at the tip then lift and pull them out.

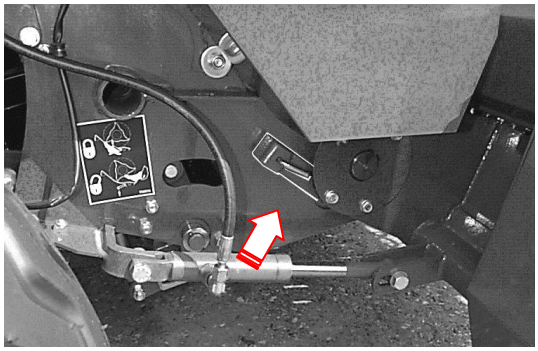


IMPORTANT!

It is necessary to put false knives in the place of the knives removed so that the product does block up the seats of the knives and make it difficult to replace the knives later.



- When you have finished this operation, anchor the knives again moving the handle to position **"knives on"** (lever raised).
- Lift again the floor through the ICON control system and the tractor selector lever.
- Remove the hatch safety device and close the hatch.



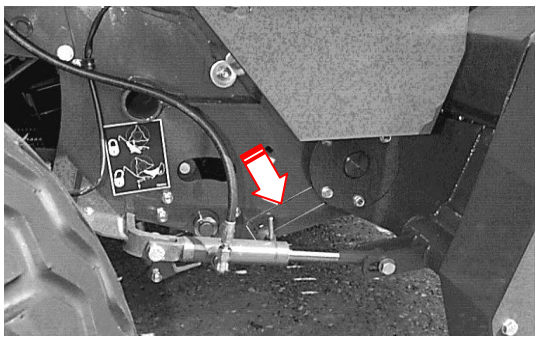
Assembly of knives or false knives ("CUT" model)

To mount the knives or the false knives, the knives must be **disengaged** doing this directly from the terminal of the ICON control system.

To facilitate removal of the knives, lower the floor through the ICON control system terminal and tractor selector lever.

More information relative to the engagement or disengagement of the knives can be found under "*ICON control system / Main functions / CUT status*".

- Release the knives by moving the handle located on the right side of the machine, to position **"knives off"** (lever lowered).

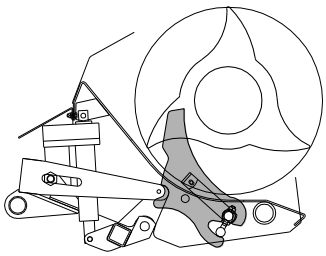


- Enter the bale formation chamber and insert the knives or false knives in the slots..

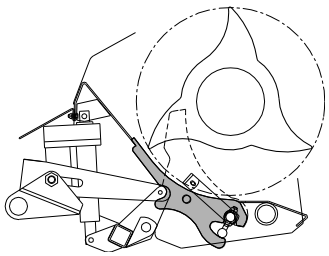
IMPORTANT!

Make sure that they are correctly inserted on the pin

If the knives or false knives are not correctly anchored there is the danger that they will enter the bale formation chamber together with the product to be baled

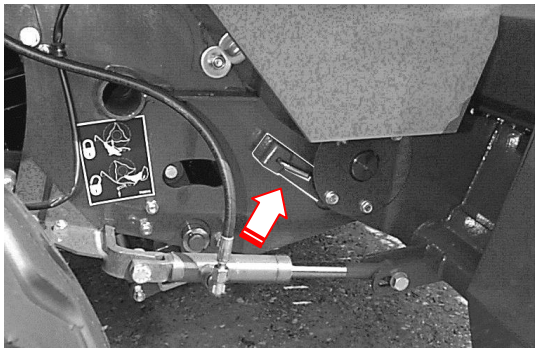


Knives engaged correctly



False knives engaged correctly

- When you have finished this operation, anchor the knives again moving the handle to position **"knives on"** (lever raised).



- Lift the floor again through the ICON control system and the tractor selector lever.
- Remove the hatch safety device and close the hatch.

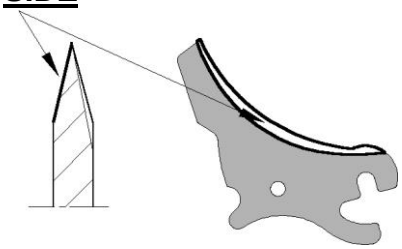
Sharpening of the cutter knives

The knives should be sharpened with suitable equipment whenever necessary.
Bear in mind that knives sharpened well reduce the power requirement and give a better quality cut.

IMPORTANT!

- **When sharpening, be careful not to cause the knives to heat up as this can compromise their resistance to wear.**
- **Only one "SIDE" of the knife should be sharpened.**

SIDE



WARNING!

- **Always work with care bearing in mind the safety regulations.**
- **The knives are sharp and cut easily; handle them with great care and always use adequate gloves and/or protective gear..**

Wheels and tyres

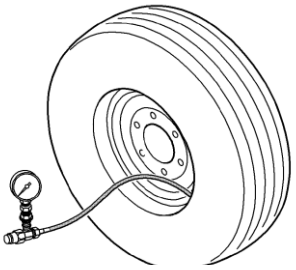
IMPORTANT!

Repairs to wheels and tyres and their disassembly/assembly must be performed by qualified personnel who are equipped with proper tools.

Please consult your dealer.

Periodically check inflation pressure and verify it based on the type of tyre mounted on your machine.

More information relative to tyres inflation pressure parameters can be found under "*Technical data / Tyres*".



IMPORTANT!

Periodically check the tightening value of nuts on the wheel hub columns, which must be 230Nm

Electrical and electronic components

- Check that the cables of the electrical system and the control unit have not been crushed or damaged.
- Check that all the sockets, plugs, cables and sensors are always cleaned of any deposits of earth or the product.
- Check and if necessary replace broken bulbs in the lighting system.

IMPORTANT!

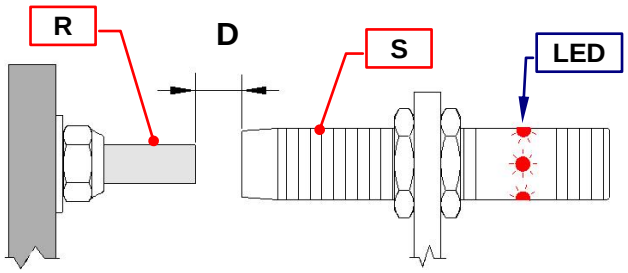
After the first 200 bales produced check the machine in regard to the points described above.

Sensors

A series of **"proximity switches"** (sensors) have been placed on the round baler. These regulate and monitor the various working phases of the machine through the ICON control system.

Adjust the distance **"X"** (about 1÷3 mm) between the sensor **"S"** and its abutment **"R"**, as shown in the figure (the example is only indicative):.

- With the ICON control system switched on, turn the nuts that fix the sensor to its support in order to move it closer to or further from its abutment.
- When the **"LED"** light located on the sensor comes on this means that you have obtained the right distance **"X"**.
- Then secure the nuts and check that the **"LED"** of the sensor still comes on as the sensor may have been moved again when the nuts were tightened.



D = 1÷3 mm

IMPORTANT!

Adjust the sensors so that they never touch or collide with their abutments when working.

CAUTION!

Make all the adjustments on all the sensors located on the machine observing the safety regulations and taking great care at the points where there could be particular danger

If it should be necessary, in order to gain access to the sensors, to open or remove the guards, remember always to close them and reposition them after finishing the adjustments.

After the first 30 hours of work

IMPORTANT!

Every new machine must be inspected after the first 30 hours of work, with checks on the following:

- **Correct tightening of all the bolts and screws.**
- **All the transmission chain tension values.**
- **The absence of oil leaks from all the components of the hydraulic system.**
- **The inflation pressure of the tyres.**
- **The correct lubrication of the transmission parts.**

- Keep to the lubricants advised.
- Spare parts must meet the requirements as defined by **FERABOLI.**

Daily checks

IMPORTANT!

- **Before a new use of the machine, make sure that there are no oil slicks on the ground. In such a case, DO NOT ACTIVATE the machine.**
- **Check where there are oil leaks, and only after ascertaining the extent of damage, please contact the authorised service centre.**

- Check the general state of the machine daily: the conditions of wear of crown wheels, supports, bearings, chains, pins, shafts and of all moving and rotating machine parts.

Special maintenance

IMPORTANT!

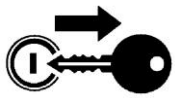
Contact your Dealer or FERABOLI Customer Service regarding any failure or malfunction.

16. MACHINE GARAGING / STORAGE

CAUTION!

Before performing any cleaning operations on the machine, take heed of all basic safety regulations, as contained in chapters "General safety standards" and "Specific safety standards".

To avoid injury from unexpected movement, perform maintenance on machines supported firmly on flat, horizontal ground.



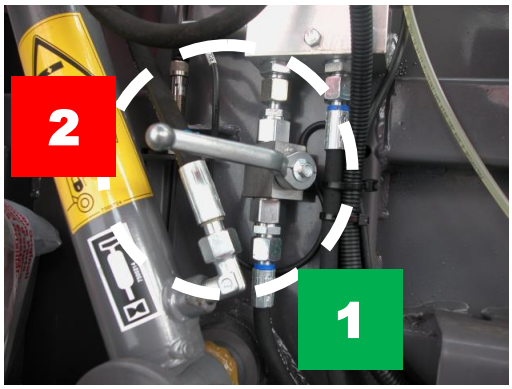
- **Do not perform maintenance while the machine is in movement. Carry out all maintenance operations with the machine switched off and after all moving parts have come to a complete stop.**
- **If the machine is connected to the tractor, engage the tractor parking brake, stop the engine and remove the key. Always switch off the ICON control system.**
- **If the machine is disconnected from the tractor, block the wheels to prevent movement.**
- **Never lift the machine from the ground.**

WARNING!

If you should need to perform maintenance with the machine hatch open or inside the bale forming chamber, block the tailgate using the safety tap in position "2" (tailgate locked).

Always comply with safety regulations when the hatch is open.

Close the tailgate when you move away from the machine.



IMPORTANT!

Remember to bring the tap back in position "1" (tailgate free) before closing the tailgate, to prevent serious injuries to the machine structure.

Preparing the baler for garaging / Cleaning

Follow the instructions below at the end of a working season, or in the event of a necessary long period of storage:

- Make sure that the machine is completely discharged.
- Discharge pressure from the hydraulic circuit.
- Store the machine is a closed and/or guarded place to prevent access by unauthorised personnel.
- Store the machine in a dry place, protected from the weather and on a suitable and flat surface (to avoid sudden, undesired machine movement, place wedges at wheels).
- Make sure that all guards on the machine are in their correct positions.
- Protect baler with a plastic tarp.
- Remove the net roll. Keep them in their boxes in a cool, dry place.
  Keep them in a box protected from rodents.

IMPORTANT!

Handle net rolls with care and without damaging them.

- Thoroughly clean the outside and inside of the machine.
  Keep the engine transmission clean of any twine, nets or product, in order to avoid damage to bearings and seals.
  Straw and dirt attract moisture, promoting rust.

IMPORTANT!

If you need to use a pressurised jet for cleaning, do not direct pressurised water toward bearings and electrical components.

Do not use abrasive products, solvents or alcohol.

- Never allow the cylinders to come in contact with corrosive chemicals to avoid altering the surface of the piston.
  Grease all exposed parts of cylinder rods and electric actuators to prevent rust.
- Apply some drops of oil on all hinge and joint parts.
- Properly lubricate at all required points. Spread rust protection or oil or grease on all unpainted or unfinished metal parts to protect from rust.
  Grease binder blades.
  Lightly grease threading of all adjustment screws.
- Paint or apply oil on components exhibiting paint wear.
- All gears and chains must be kept clean. Clean chains by washing them with diesel fuel. Dry them thoroughly and lubricate with high viscosity oil.
- Check all outlets, plugs and wiring are clean from any accumulation of earth or product.
  Protect electrical connectors from rust using a suitable fluid.
- Clean the terminal with a damp cloth and using a mild detergent to avoid erasing writing on the panel.
  Remove the ICON control terminal.
  Store them in a place sheltered and protected from the weather, dust, moisture, insects and rodents.
- Remove the cardan shaft from the machine and store in a dry, protected place.
  For further information, read the use and maintenance manual supplied with the shaft itself.
- Perform a thorough check and replace any damaged or worn parts.

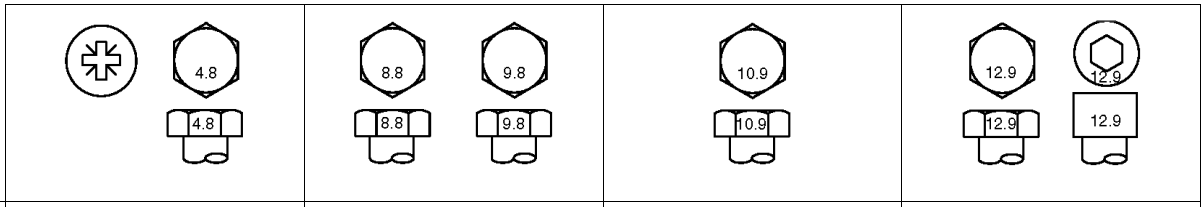
Preparing the baler for the start of a season / Before returning to the field

Before re-starting field operations, thoroughly verify your machine's conditions and carry out all necessary maintenance operations described in this manual.

- Read this operator's manual again.
- Always follow safety instructions contained in this manual.
- Check and, if necessary, top up the gear box up to the plug level. See the "Lubrication" chapter.
- Remove oil from chains.
- Fully lubricate the machine to force the exit of moisture from bearings. See the "Lubrication" chapter
- Check tyre pressure. See “Tyre” section in the “Technical Data” chapter.
- Tighten all screws, nuts and retaining screws. See the "Maintenance and regulations" chapter.
- Check baler adjustments as described in “Maintenance and regulations chapter..
- Check that the ICON control system is functioning properly.
- Check the areas that will be in contact with the net roll. These areas must be clean and smooth.

17. TABLES AND SCHEMES

Torque settings



Bolt Ø	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
Screw	Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]	
Dimensions	Nm	lb-in	Nm	lb-in	Nm	lb-in	Nm	lb-in	Nm	lb-in	Nm	lb-in	Nm	lb-in	Nm	lb-in
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									Nm	lb-in	Nm	lb-in	Nm	lb-in	Nm	lb-in
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			Nm	lb-in	Nm	lb-in	Nm	lb-in								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	Nm	lb-in														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

The values given above are only for general use and are based on screw or bolt strength. DO NOT use these values if a different torque value or tightening procedure it's prescribed for a specific application. For the stainless steel screws or nuts on the U-brackets, see tightening instructions for the specific application. Tighten plastic insert or steel lock nuts tightening the nut to the dry torque shown in the table, unless it has been given different instructions for the specific application.

The safety plugs are designed to fail under predetermined loads. Always replace with security screws with the same property class. Replace screws with another of equal or greater class. If you use an upper class screw, it must be tightened to the original screws torque. Make sure that bolts threads are clean and bolts are perfectly spoon fed. If possible, grease bolts naked or galvanized (with the exception of locking nuts, bolts or wheel nuts), unless it has been given different instructions for the specific application

[a] "Lubricated" means, coated with a lubricant such as engine oil, fixing devices as phosphate coating or oil, or fasteners M20 or greater.
[b] "Dry" means zinc plated without any lubrication.

Types of oil and grease

IMPIEGO	TIPO
Gear box oil	AGIP BLASIA EP 150
Automatic chain lubrication oil tank.	AGIP OSO 100
Grease for decal 7500214 lubricating points	AGIP GR MU EP0

Summary of maintenance and lubrication operations

This table summarises the maintenance and lubrication operations described in the operator's manual.

IMPORTANT!

All the operations described below must be done at the beginning and end of each season.

WARNING!

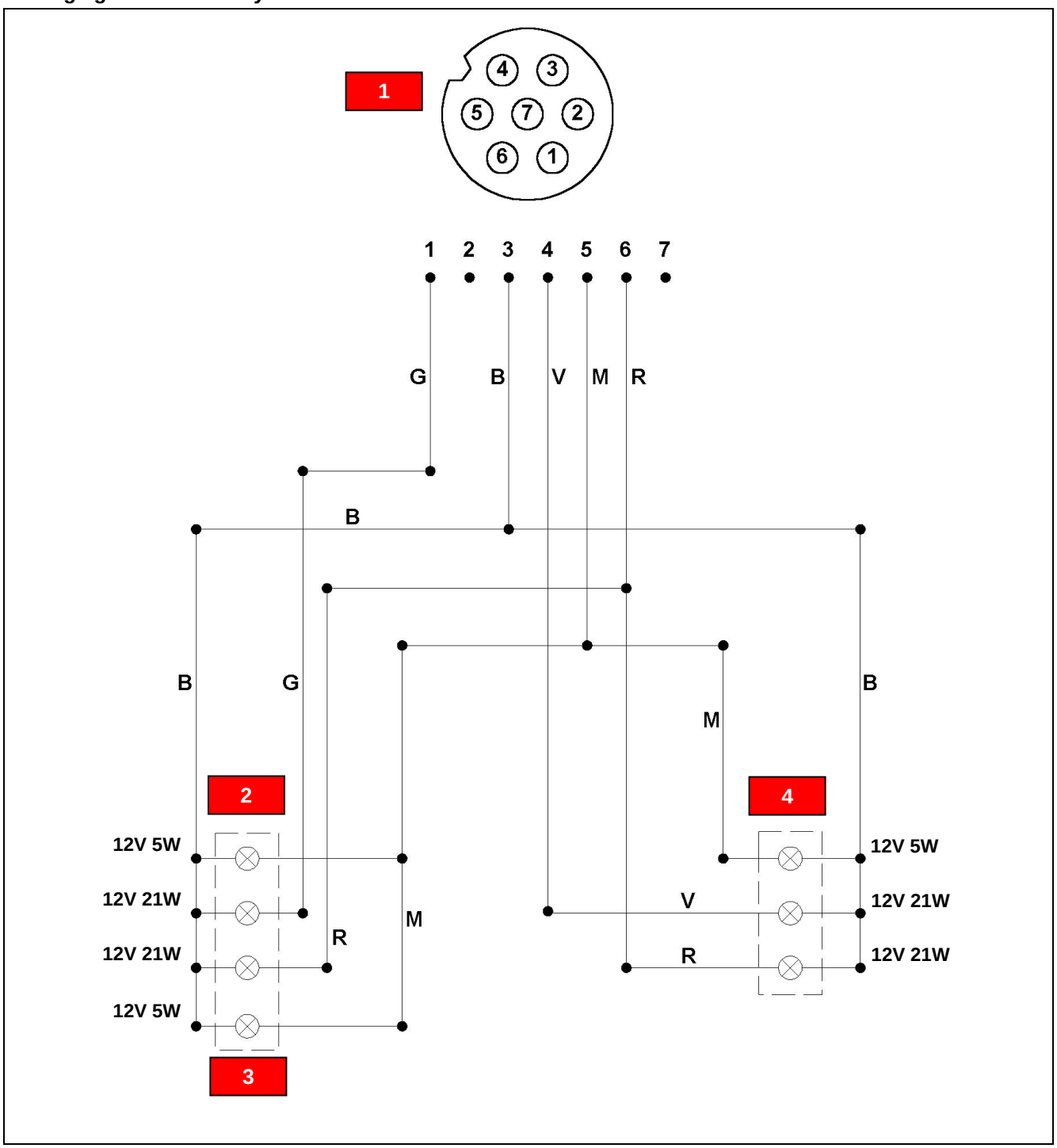
When lubricating always respect the regulations contained in the chapter "General safety standards", "Specific safety standards" e "Maintenance and regulations".

OPERAZIONI DA EFFETTUARE	
Grease all points provided for by decal 7500214.	30 working hours
Grease hinges of tailgate.	30 working hours
Grease pins of jacks.	30 working hours
Grease track of cams of pick-up unit.	10 working hours
Grease cardan shaft. *	***** *(see note)*
Check the oil level in the transmission box.	30 working days / 1000 bales produced
Sostituite l'olio della scatola di deviazione.	annually
Check the welds.	annually
Check if bolts and screws are correctly tightened.	30 working days
Check that there are no oil leaks in the hydraulic system.	daily
Replace the hydraulic hoses.	5 years
Verify the general state of the machine: crowns, brackets, bearings, chains, pins, shafts and all the moving and rotating parts.	daily
Check the tension of the chains.	30 working days
Check the bearings of the roll-holder and the bushings of the spring bearing bar of the reel-holder.	7 working days
Check the cams and the collection tines of the pick-up.	30 working days
Check the oil filter of the chains automatic oiling system	annually
Periodically check and remake knifes' sharpening.	
Check that the electrical light system works for road transport.	

Check the condition of the adhesive safety signs (pictograms).
Check the condition of all the protection guards and safety measures.
Periodically check the wiring and sensors (first check: after the first 200 bales produced)
Check the pressure of the tyres.

(*****) For further information on the maintenance of the cardan shaft consult the instructions contained in the booklet provided together with the cardan shaft

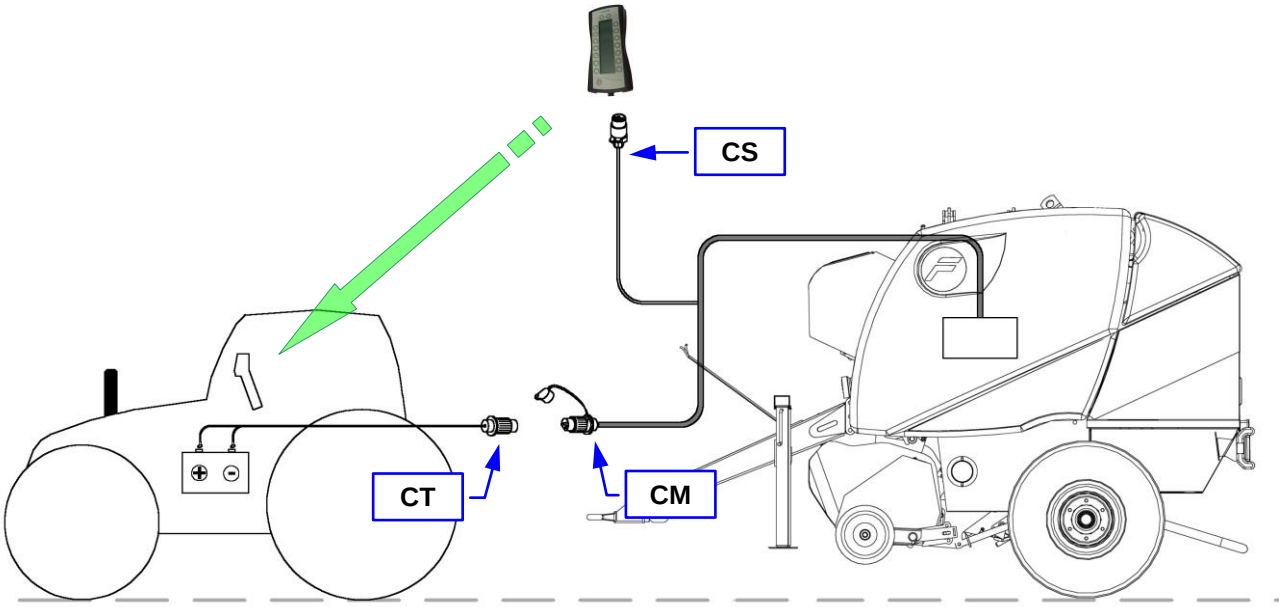
Driving lights electrical system



1) 7 pole plug
2) Right rear lamp
3) Number plate light
4) Rear left lamp

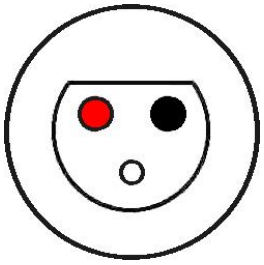
"G" = YELLOW
"B" = WHITE
"V" = GREEN
"M" = BROWN
"R" = RED

Mating connectors



Tractor side eeder cable

S1" **= Female COBO connector (rear view):**
+) Red: positive 12V
-) Black: negative

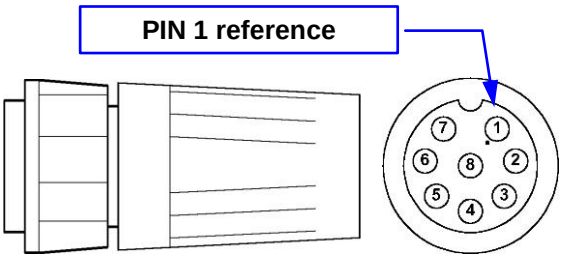


Machine side feeder cable

"C" **= Male COBO connector (rear view):**
+) Red: positive 12V
-) Black: negative

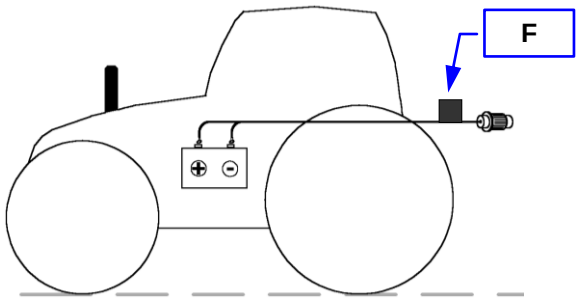
Signal cable

"CS" **= 8 pin connector LTWBD-08BFFA-L180 (front side)**



Fuses

Fuses “F” are located on the feeder cable and they are "blade" type, 50 Ampere.



USATE SEMPRE RICAMBI ORIGINALI
ALWAYS USE ORIGINAL SPARE PARTS
IMMER DIE ORIGINAL-ERSATZTEILE VERWENDEN
EMPLOYEZ TOUJOURS LES PIECES DE RECHANGE ORIGINALES
UTILIZAR SIEMPRE REPUESTOS ORIGINALES

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